04-28-2023 LETTING ITEM 086

FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR INDEX OF OF HIGHWAY STANDARDS, SEE SHEET NO. 2

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	1
	ILLINOIS	CONTRACT NO. 61J51		

PROJECT LOCATED IN:
UNICORPORATED MCHENRY COUNTY
VILLAGE OF BULL VALLEY
CITY OF MCHENRY

TRAFFIC DATA

ROAD NAME: WALKUP ROAD/CRYSTAL LAKE ROAD
FUNCTIONAL CLASSIFICATION: OTHER PRINCIPAL ARTERIAL
POSTED SPEED LIMIT: 40 MPH TO 50 MPH
DESIGN SPEED: 50 MPH
ADT: 9150-14700

LICENSED PROFESSIONAL ENGINEER
TODD ARTZ
062-057838
STATE OF ILLINOIS

TODD ARTZ, P.E., DATE 11/17/2023
HANSON PROFESSIONAL SERVICES INC.
LICENSE EXPIRES: 11/30/2023
SHEET RANGE: 1 - 6; 15 - 47

LICENSED PROFESSIONAL ENGINEER
KURT
BIALOBRESKI
062-058674
STATE OF ILLINOIS

KURT BIALBRESKI, P.E. DATE 11/17/2023
HANSON PROFESSIONAL SERVICES INC.
LICENSE EXPIRES: 11/30/2023
SHEET RANGE: 7 - 14

PROGRAM AND OFFICE ENGINEER: CARMEN E. RAMOS, P.E., SCHAUMBURG, IL

0 100' 200' 300' — 1"= 100'
0 10' 20' 30' — 1"= 10'
0 50' 100' — 1"= 50'
0 50' 100' — 1"= 40'
0 50' 100' — 1"= 30'
0 50' 100' — 1"= 20'

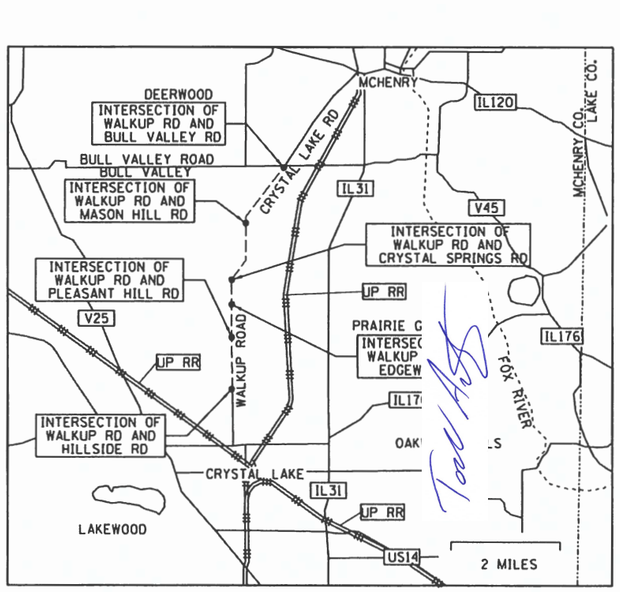
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: TODD ARTZ
PROJECT MANAGER: KURT BIALOBRESKI
CONTRACT NO. 61J51

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED FEDERAL AID HIGHWAY

FAU ROUTE 0085 (WALKUP ROAD /CRYSTAL LAKE ROAD)
BULL VALLEY ROAD TO HILLSIDE ROAD
SECTION 19-00511-00-SP
PROJECT YNA2(285)
TRAFFIC SIGNAL MODERNIZATION
MCHENRY COUNTY
JOB NO.: C-91-079-20



LOCATION MAP

GROSS LENGTH = N / A
NET LENGTH = N / A
WORK IN INTERSECTIONS ONLY

LOCATION OF SECTION INDICATED THUS: —

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

APPROVED FEBRUARY 21 20 23
COUNTY ENGINEER
MCHENRY COUNTY DIVISION OF TRANSPORATION

PASSED FEB 21 20 23
DISTRICT 1 ENGINEER OF LOCAL ROADS AND STREETS

RELEASED FOR BID BASED ON LIMITED REVIEW FEBRUARY 21 20 23
REGIONAL ENGINEER

DATE: -

HANSON
Hanson Professional Services Inc.
7625 N. University St., Suite 200
Peoria, Illinois 61614
Offices Nationwide

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

INDEX OF SHEETS

LIST OF STANDARDS

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
424001-11	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
424006-05	DIAGONAL CURB RAMPS FOR SIDEWALKS
424021-06	DEPRESSED CORNER FOR SIDEWALKS
606001-08	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701101-05	OFF-RD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
701106-02	OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
701426-09	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS >= 45 MPH
701427-05	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS <= 40 MPH
701701-10	URBAN LANE CLOSURE, MULTI LANE INTERSECTION
701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-08	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
720006-04	SIGN PANEL ERECTION DETAILS
720016-04	MAST ARM MOUNTED STREET NAME SIGN
780001-05	TYPICAL PAVEMENT MARKINGS
814001-03	HANDHOLES
821101-02	LUMINAIRE WIRING IN POLE
838001-01	BREAKAWAY DEVICES
857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
873001-02	TRAFFIC SIGNAL GROUNDING & BONDING
876001-04	PEDESTRIAN PUSH BUTTON POST
877011-10	STEEL COMB. MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
877012-07	STEEL COMB. MAST ARM ASSEMBLY AND POLE 56' THROUGH 75'
878001-11	CONCRETE FOUNDATION DETAILS
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS

LIST OF D1 STANDARDS

BD24	CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT
BE205	LIGHTING CONTROLLER, BASE MOUNTED, 480 VOLT, 200 AMP, (DUAL) RADIO SCADA (4 SHEETS)
BE215	LIGHTING CONTROLLER SINGLE DOOR
BE240	COMBINATION LIGHTING, TRAFFIC SIGNAL SCHEMATIC
BE702	MISCELLANEOUS ELECTRICAL DETAILS, SHEET A - (CABLE SPLIOCE, POLE WIRING, TRENCH DETAIL)
BE1050	FIBER OPTIC INTERCONNECT CABINET
TC13	DISTRICT ONE TYPICAL PAVEMENT MARKINGS
TS02	MAST ARM MOUNTED STREET NAME SIGNS
TS05	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESGIN DETAILS

UTILITY NOTE

THE LOCATIONS OF THOSE BURIED AND ABOVEGROUND UTILITIES SHOWN ARE APPROXIMATE, ARE SHOWN FOR CONTRACTOR INFORMATIONAL USE ONLY, AND ARE NOT TO BE REFERENCED FOR CONSTRUCTION PURPOSES. THE IMPLIED PRESENCE OR ABSENCE OF UTILITIES IS NOT TO BE CONSTRUED BY THE OWNER, ENGINEER, CONTRACTOR, OR SUBCONTRACTORS TO BE AN ACCURATE AND COMPLETE REPRESENTATION OF UTILITIES THAT MAY OR MAY NOT EXIST ON THE CONSTRUCTION SITE. BURIED AND ABOVEGROUND UTILITY LOCATION, IDENTIFICATION, AND MARKING ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. REROUTING, DISCONNECTION, PROTECTION, ETC. OF ANY UTILITIES MUST BE COORDINATED AMONG THE CONTRACTOR, UTILITY COMPANY, AND OWNER. SITE SAFETY, INCLUDING THE AVOIDANCE OF HAZARDS, ASSOCIATED WITH BURIED AND ABOVEGROUND UTILITIES REMAIN THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

LEGEND

EXISTING MANHOLE	GAS
CONTROL POINT	TELEPHONE
EXISTING TELEPHONE PEDESTAL	CABLE TELEVISION
EXISTING GUY	FIBER OPTIC
EXISTING POWER POLE	WATER
EXISTING CULVERT	PIPE CULVERT
EXISTING SIGN	PROPOSED STORM SEWER
EXISTING TREE	EXISTING STORM SEWER
EXISTING R.O.W. MARKER	OVERHEAD ELECTRIC
EXISTING MAILBOX	FENCE
PROPOSED MAILBOX	PROPOSED R.O.W.
PROPOSED INLET	EXISTING R.O.W.
PROPOSED MANHOLE	TEMPORARY EASEMENT
PROPOSED SIGN	

PROJECT CONTACTS			
SCHOOLS	DISTRICT 155 (CRYSTAL LAKE)	SHANNON PODZIMEK	(815) 455-8500
	DISTRICT 47 (CRYSTAL LAKE)	DENISE BARR	(815) 788-5014
	DISTRICT 156 (MCHENRY)	SUSAN BAUMGARTNER	(815) 385-7900
	DISTRICT 15 (MCHENRY)	BECCA LATHAM	(847) 963-3204
EMS	CRYSTAL LAKE FIRE/RESCUE DEPARTMENT	PAUL DERAEDT	(815) 356-3640
	MCHENRY TOWNSHIP FIRE PROTECTION DISTRICT	STEVE SPRAKER	(815) 385-0075
	NUNDA RURAL FIRE PROTECTION DISTRICT	MICHAEL KEENAN	(815) 455-1559
STATE	ILLINOIS DEPARTMENT OF TRANSPORTATION - DISTRICT ON	CARMEN RAMOS	(847) 705-4021
COUNTY	MCHENRY COUNTY DIVISION OF TRANSPORTATION	REBECCA BRAZAS	(815) 482-1051
	MCDOT CONSTRUCTION CONTACT	JEREMY STULL	(815) 334-4967
VILLAGES	CITY OF MCHENRY	TROY STRANGE	(815) 363-2186
	VILLAGE OF BULL VALLEY	MIKE KOCH	(815) 459-4833
	NUNDA TOWNSHIP	MIKE LESPERANCE	(815) 459-4410
UTILITIES	AT&T (DISTRIBUTION)	STEVE LARSON	(630) 573-5450
	AT&T (TRANSMISSION LONG DISTANCE)	KEN COLWELL	(630) 383-9249
	COMED ELECTRONIC PLAN SUBMITTAL	LISA ARGAST	(630) 576-7094
	NICOR GAS	PAUL EGGEN	(630) 388-2903
	CRYSTAL LAKE WATER	ABIGAIL WILGREEN	(815) 356-3605
	MCHENRY COUNTY WATER	TROY STRANGE	(815) 363-2186

GENERAL NOTES

1. THE CONSTRUCTION SHALL BE GOVERNED BY THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS", 2022 EDITION AND "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS", 2023 EDITION
2. WHERE SECTION, SUB-SECTION, SUBDIVISION, OR PROPERTY MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE ALL PROPERTY MARKERS UNTIL AN OWNER OR AUTHORIZED SURVEYOR HAS WITNESSED OR REFERENCED THEIR LOCATION.
3. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCY IMMEDIATELY.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO ANY UTILITY LINES AND EXISTING FACILITIES TO REMAIN THAT ARE DAMAGED AS A RESULT OF THE WORK.
5. ALL SECTIONS, DETAILS AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE, UNLESS OTHERWISE SHOWN.
6. ALL THE ELEVATIONS, STATIONS, AND OFFSETS SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS.
8. EXCESS MATERIAL, IF NOT USED FOR OTHER ON-SITE PURPOSES, SHALL BE HAULED OFF-SITE AT CONTRACTOR'S EXPENSE.
9. THE WORK AREA SHALL BE POSITIVELY DRAINED DURING CONSTRUCTION. FINAL GRADES SHALL BE PROTECTED AGAINST DAMAGE FROM EROSION, SEDIMENTATION, AND TRAFFIC.
10. THE CONTRACTOR SHALL USE ANY ON SITE MATERIAL DEEMED SUITABLE BY THE ENGINEER BEFORE ANY NEW FILL IS HAULED TO THE SITE.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
12. CONTRACTORS BIDDING THIS PROJECT SHALL VISIT THE SITE BEFORE BIDDING.
13. TRAFFIC SIGNS LOCATED ON EXISTING SIGNAL MAST ARMS AND POSTS SHOULD BE REMOVED SAFELY STORED AND REINSTALLED TO THE PROPOSED TRAFFIC SIGNAL POSTS OR MAST ARMS. ALL RELOCATED SIGNS AND PROPOSED SIGNS SHALL BE INSTALLED WITH SUPPORTING CHANNELS UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
14. PROPOSED SIDEWALKS SHALL BE 5" PCC ON A 4" CA-6(SUB-BASE GRANULAR MATERIAL, TYPE B)
15. THE LOCATIONS AND ELEVATIONS SHOWN ON THE PLANS MAY BE MODIFIED IN THE FIELD AS NECESSARY AND SHALL IN NO WAY BE A CAUSE FOR FURTHER COMPENSATION TO THE CONTRACTOR.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ANY FENCE LOCATIONS WITHIN ROW IN THE PROJECT LIMITS.
17. ALL COORDINATE INFORMATION SHOWN IS EXPRESSED IN ILLINOIS STATE PLANE WEST ZONE (1983) COORDINATE SYSTEM.

HMA MIXTURE REQUIREMENTS		
LOCATION:	WALKUP ROAD	WALKUP ROAD
MIXTURE USE(S):	HMA PATCHING - 2"	BINDER COURSE - 11"
PG:	PG 64-28	PG 64-22
DESIGN AIR VOIDS:	4% @ N-70	4% @ N-70
MIXTURE COMPOSITION (GRADIENT MIXTURE)	IL 9.5	IL 19.0
FRICTION AGGREGATE:	MIXTURE D	N/A
MIXTURE WEIGHT:	112 LB/SQ YD/IN	112 LB/SQ YD/IN
QUALITY MANAGEMENT PROGRAM:	QC/QA	QC/QA
SUBLOT SIZE:	N/A	N/A

USER NAME = Pearc00397	DESIGNED - NN	REVISED -	
	DRAWN - JAP	REVISED -	
PLOT SCALE = 2.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 2/17/2023	DATE - -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, GENERAL NOTES, LEGEND AND LIST OF STANDARDS

SCALE: | SHEET OF SHEETS | STA. TO STA.

HPSI

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	2
	19L0111	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			

DESIGNED DRAWN REVIEWED

PENTABLE NAME = ...\pen\LargeFormat_Plotter.tbl

PLOT DRIVER NAME = ...\HANSON_pdf_300dpi.pltcfg

	SPEC PROV.	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	HILLSIDE	PLEASANT HILL	EDGEWOOD	CRYSTAL SPRINGS	MASON HILL	BULL VALLEY
						CONSTRUCTION CODE 0021					
						90% STATE (HSIP FUNDS)				10% CITY	
#		20101200	TREE ROOT PRUNING	EACH	1	1					
#		20101300	TREE PRUNING (1 TO 10 INCH DIAMETER)	EACH	1	1					
		21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	244	120	124				
		25200110	SODDING, SALT TOLERANT	SQ YD	244	120	124				
		28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	5	3	3				
		31101000	SUBBASE GRANULAR MATERIAL, TYPE B	TON	33	18	15				
		42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	2,559	1,408	1,151				
		42400800	DETECTABLE WARNINGS	SQ FT	309	128	181				
		44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	347	167	180				
		44000600	SIDEWALK REMOVAL	SQ FT	1,282	727	555				
		44201798	CLASS D PATCHES, TYPE I, 13 INCH	SQ YD	121	59	62				
		60260100	INLETS TO BE ADJUSTED	EACH	1	SPEC	SPEC	SPEC	SPEC	SPEC	SPEC
		60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	347	167	180				
		67100100	MOBILIZATION	L SUM	1	0.17	0.17	0.17	0.17	0.17	0.17
		70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	0.17	0.17	0.17	0.17	0.17	0.17
		70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	0.17	0.17	0.17	0.17	0.17	0.17
		70107025	CHANGEABLE MESSAGE SIGN	CAL DA	50	SPEC	SPEC	SPEC	SPEC	SPEC	SPEC
#		72000100	SIGN PANEL - TYPE 1	SQ FT	120	38	23	15	8	8	30

#SPECIALTY ITEMS

DESIGNED
DRAWN
REVIEWED

HPSI

USER NAME = Pearc00397	DESIGNED - NN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN - NN	REVISED -	
PLOT SCALE = 2.0000 ' / In	CHECKED -	REVISED -	
PLOT DATE = 3/16/2023	DATE - -	REVISED -	

SUMMARY OF QUANTITIES

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	3
	19L0111	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			

PENTABLE NAME = ...\IDOT-2017\Plot\IDOT.TBL
PLOT DRIVER NAME = ...\HANSON_pdf_300dpi.pltcfg

	SPEC PROV.	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	HILLSIDE	PLEASANT HILL	EDGEWOOD	CRYSTAL SPRINGS	MASON HILL	BULL VALLEY
						CONSTRUCTION CODE 0021					
						90% STATE (HSIP FUNDS)				10% CITY	
#		78009006	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	FOOT	944	400	544				
#		78009012	MODIFIED URETHANE PAVEMENT MARKING - LINE 12"	FOOT	1,405	491	914				
#		78009024	MODIFIED URETHANE PAVEMENT MARKING - LINE 24"	FOOT	104	22	82				
		78300202	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	1,119	229	890				
		81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	212	110	56				46
		81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	1,025	87	201	44	87	114	492
		81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	691		281				410
		81400100	HANDHOLE	EACH	3		2				1
		81400300	DOUBLE HANDHOLE	EACH	3						3
		81702110	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	5,796		954	922	617	581	2,722
*		85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	6	1	1	1	1	1	1
		87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	963		220	196			547
		87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	13,386	3,338	3,783	806	823	927	3,709
		87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	4,417	421	749	439	304	286	2,218
		87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	2,354	243	654	70	97	103	1,187
		87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	9	5	4				
		87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	12	2	3			1	6
		87702920	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT.	EACH	1			1			
		87702930	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 40 FT.	EACH	4		2		1		1

#SPECIALTY ITEMS

DESIGNED			
DRAWN			
REVIEWED			

USER NAME = Pearc00397	DESIGNED - NN	REVISED -
	DRAWN - NN	REVISED -
PLOT SCALE = 2.0000 ' / in	CHECKED -	REVISED -
PLOT DATE = 3/16/2023	DATE - -	REVISED -

PENTABLE NAME = ...\IDOT-2017\Plot\IDOT.TBL
PLOT DRIVER NAME = ...\HANSON_pdf_300dpi.pltcfg

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET OF SHEETS | STA. | TO STA.

HPSI

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	4
	19L0111	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			

SPEC PROV.	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	HILLSIDE	PLEASANT HILL	EDGEWOOD	CRYSTAL SPRINGS	MASON HILL	BULL VALLEY
					CONSTRUCTION CODE 0021					
					90% STATE (HSIP FUNDS)				10% CITY	
	87702955	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 45 FT.	EACH	1			1			
	87702960	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 46 FT.	EACH	2					1	1
	87702970	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 48 FT.	EACH	1						1
	87702980	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 50 FT.	EACH	1						1
	87702990	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 54 FT.	EACH	1						1
	87800100	CONCRETE FOUNDATION, TYPE A	FOOT	84	28	28			4	24
	87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	134		26	26	13	13	56
	87900200	DRILL EXISTING HANDHOLE	EACH	21	8	8	2	1	2	
	88040070	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	36	6	6	4	7	6	7
	88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	35	4	8	8	4	4	7
	88040110	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	14	4	2	2	1	1	4
	88040120	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	14	4	2	2	1	1	4
	88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	16	8	8				
	88200510	TRAFFIC SIGNAL BACKPLATE, RETROREFLECTIVE	EACH	99	18	18	16	13	12	22
	88700200	LIGHT DETECTOR	EACH	4						4
*	89501400	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	4		2	2			
*	89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	5	1	1	1	1	1	
*	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	6	1	1	1	1	1	1

#SPECIALTY ITEMS

DESIGNED
DRAWN
REVIEWED

MODEL: SHEET 3
FILE NAME: pw:\\hansonllnc-pw.bentley.com:hanson-pw-01\Documents\19\dot\19L0111\CAD - Use MicroStation V8i or PowerGeopak SS10\RoadSheets\04-quantities.dgn

HPSI

USER NAME = Pearc00397	DESIGNED - NN	REVISED -	
	DRAWN - NN	REVISED -	
PLOT SCALE = 2.0000 ' / in	CHECKED -	REVISED -	
PLOT DATE = 3/16/2023	DATE - -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	5
	19L0111	CONTRACT NO.	61J51	
	ILLINOIS	FED. AID PROJECT		

PENTABLE NAME = ...\IDOT-2017\Plot\IDOT.TBL
PLOT DRIVER NAME = ...\HANSON_pdf_300dpi.pltcfg

	SPEC PROV.	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	HILLSIDE	PLEASANT HILL	EDGEWOOD	CRYSTAL SPRINGS	MASON HILL	BULL VALLEY
						CONSTRUCTION CODE 0021					
						90% STATE (HSIP FUNDS)				10% CITY	
	*	X0321973	MODIFY EXISTING SERVICE INSTALLATION	EACH	6	1	1	1	1	1	1
	*	X0322281	WIDE AREA VIDEO DETECTION SYSTEM COMPLETE	EACH	1						1
	*	X0323986	RELOCATE EXISTING VIDEO VEHICLE DETECTOR	EACH	8		2	2	2	2	
	*	X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	963		220	196			547
	*	X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	826	243	240	120	121	102	
		X0338320	CONCRETE COLOR ADDITIVE	CU YD	0.6	0.2	0.3				
	*	X1400107	FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET	EACH	1						1
	*	X1400150	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	6	1	1	1	1	1	1
	*	X1400238	LUMINAIRE, LED, SPECIAL	EACH	10		2	2	1	1	4
	*	X2130010	EXPLORATION TRENCH, SPECIAL	FOOT	300	50	50	50	50	50	50
	*	X8570215	FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	5	1	1	1	1	1	
	*	X8760200	ACCESSIBLE PEDESTRIAN SIGNALS	EACH	16	8	8				
	*	X8809005	LED SIGNAL FACE, LENS COVER	EACH	99	18	18	16	13	12	22
	*	X8870300	EMERGENCY VEHICLE PRIORITY SYSTEM	EACH	1						1
	*	XX005937	LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	22	4	4	4	3	3	4
	*	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	0.17	0.17	0.17	0.17	0.17	0.17
	*	Z0007430	TEMPORARY SIDEWALK	SQ FT	2,559	1,408	1,151				
Δ	*	Z0076600	TRAINEES	HOUR	500	SPEC	SPEC	SPEC	SPEC	SPEC	SPEC
Δ	*	Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	500	SPEC	SPEC	SPEC	SPEC	SPEC	SPEC

#SPECIALTY ITEMS

Δ 0042

DESIGNED | DRAWN | REVIEWED

HPSI

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	DRAWN - NN	REVISED -	
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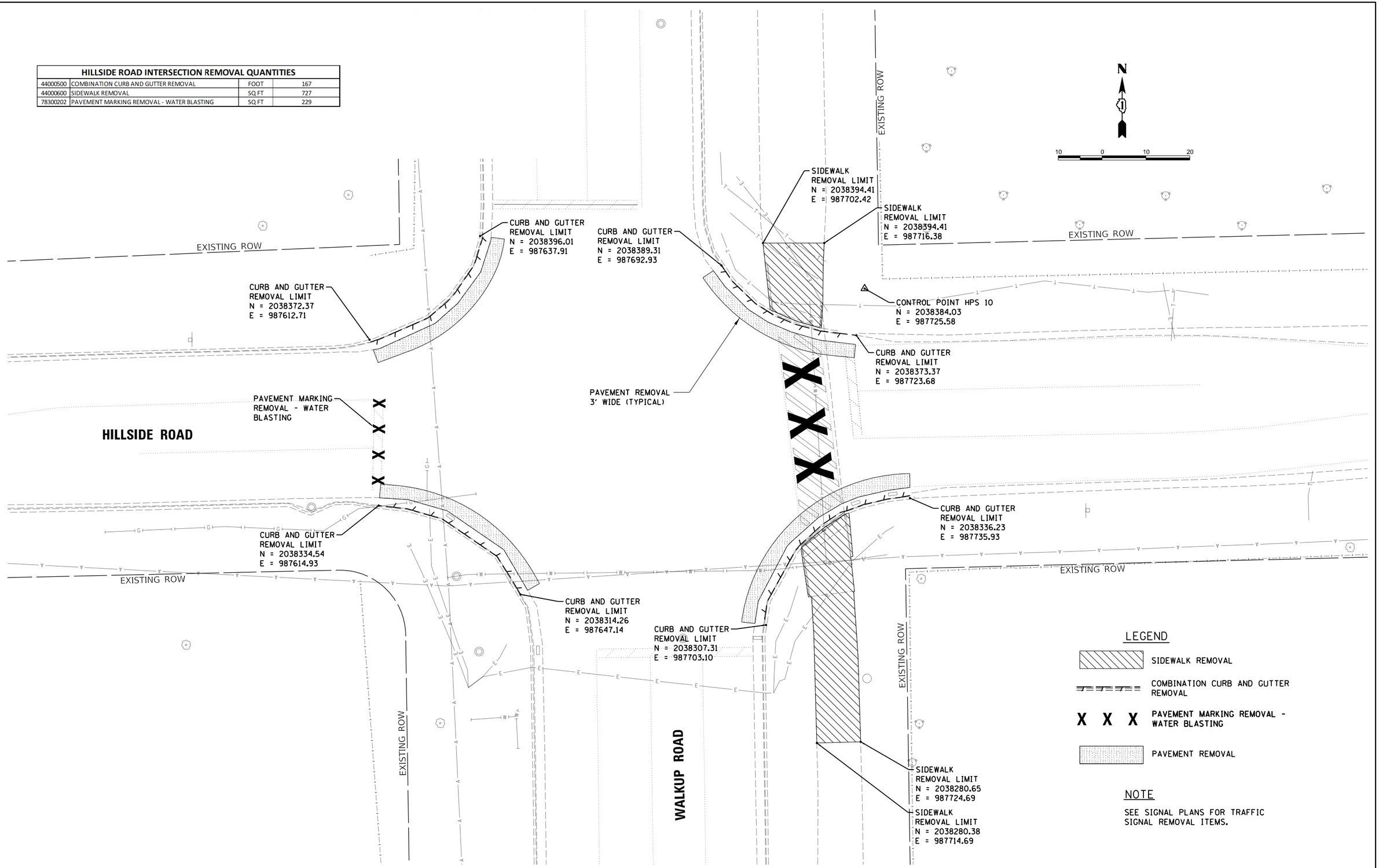
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	6
	19L0111	CONTRACT NO. 61J51		
	ILLINOIS	FED. AID PROJECT		

HILLSIDE ROAD INTERSECTION REMOVAL QUANTITIES			
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	167
44000600	SIDEWALK REMOVAL	SQ.FT	727
78300202	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ.FT	229



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DESIGNED
DRAWN
REVIEWED

HPSI

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	DRAWN - JAP	REVISED -	
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PLOT DATE = 3/16/2023	DATE - -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HILLSIDE ROAD / WALKUP ROAD
REMOVAL SHEET

SCALE: 1"=10' | SHEET OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	7
	19L0111	CONTRACT NO. 61J51		
		ILLINOIS	FED. AID PROJECT	

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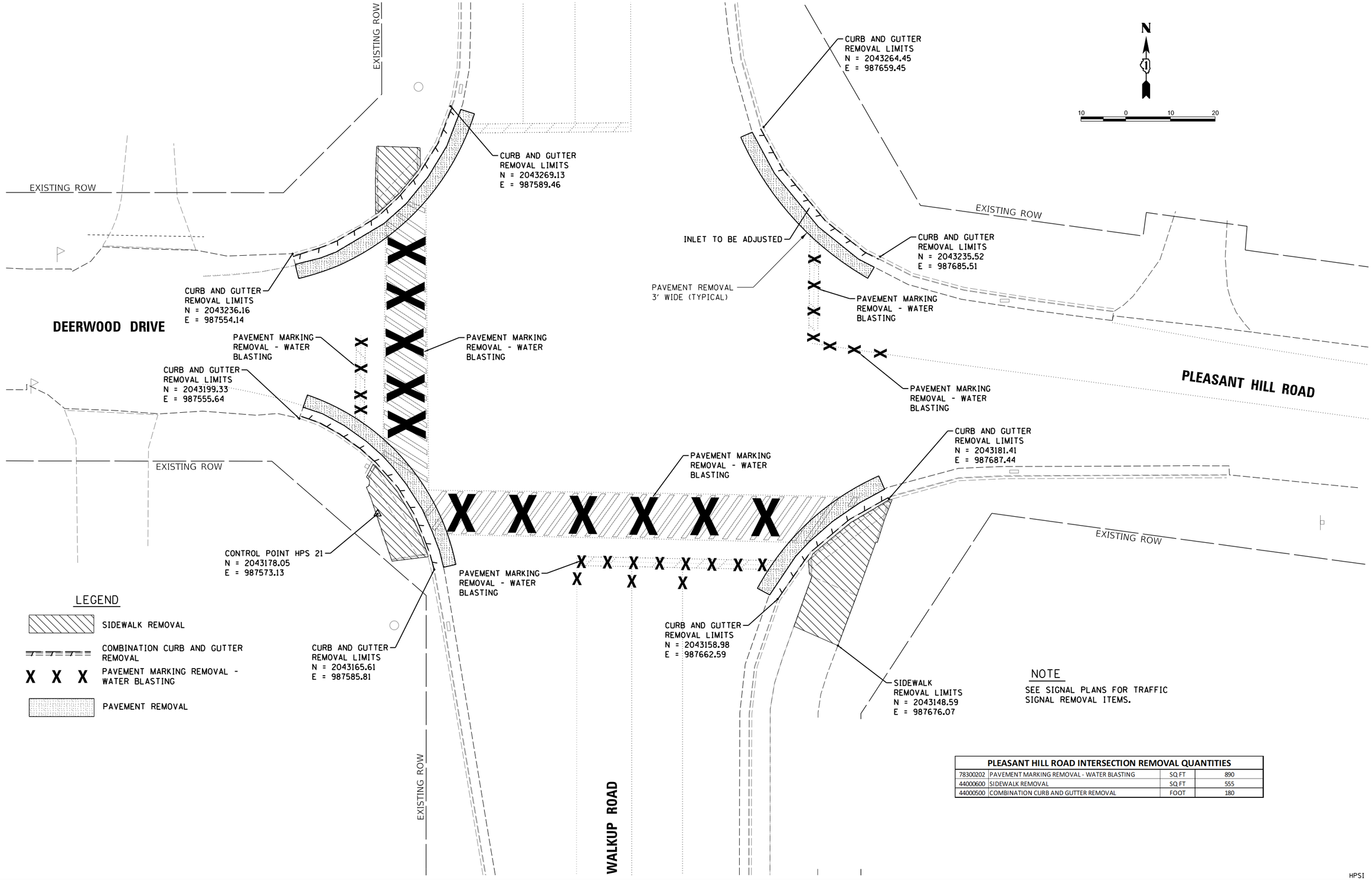

LEGEND

- SIDEWALK REMOVAL
- COMBINATION CURB AND GUTTER REMOVAL
- X X X PAVEMENT MARKING REMOVAL - WATER BLASTING
- PAVEMENT REMOVAL

NOTE

SEE SIGNAL PLANS FOR TRAFFIC SIGNAL REMOVAL ITEMS.

PLEASANT HILL ROAD INTERSECTION REMOVAL QUANTITIES

78300202	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	890
44000600	SIDEWALK REMOVAL	SQ FT	555
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	180

MODEL: Pleasant Hill Road
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DESIGNED | DRAWN | REVIEWED

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PLOT DATE = 3/16/2023	DATE - -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

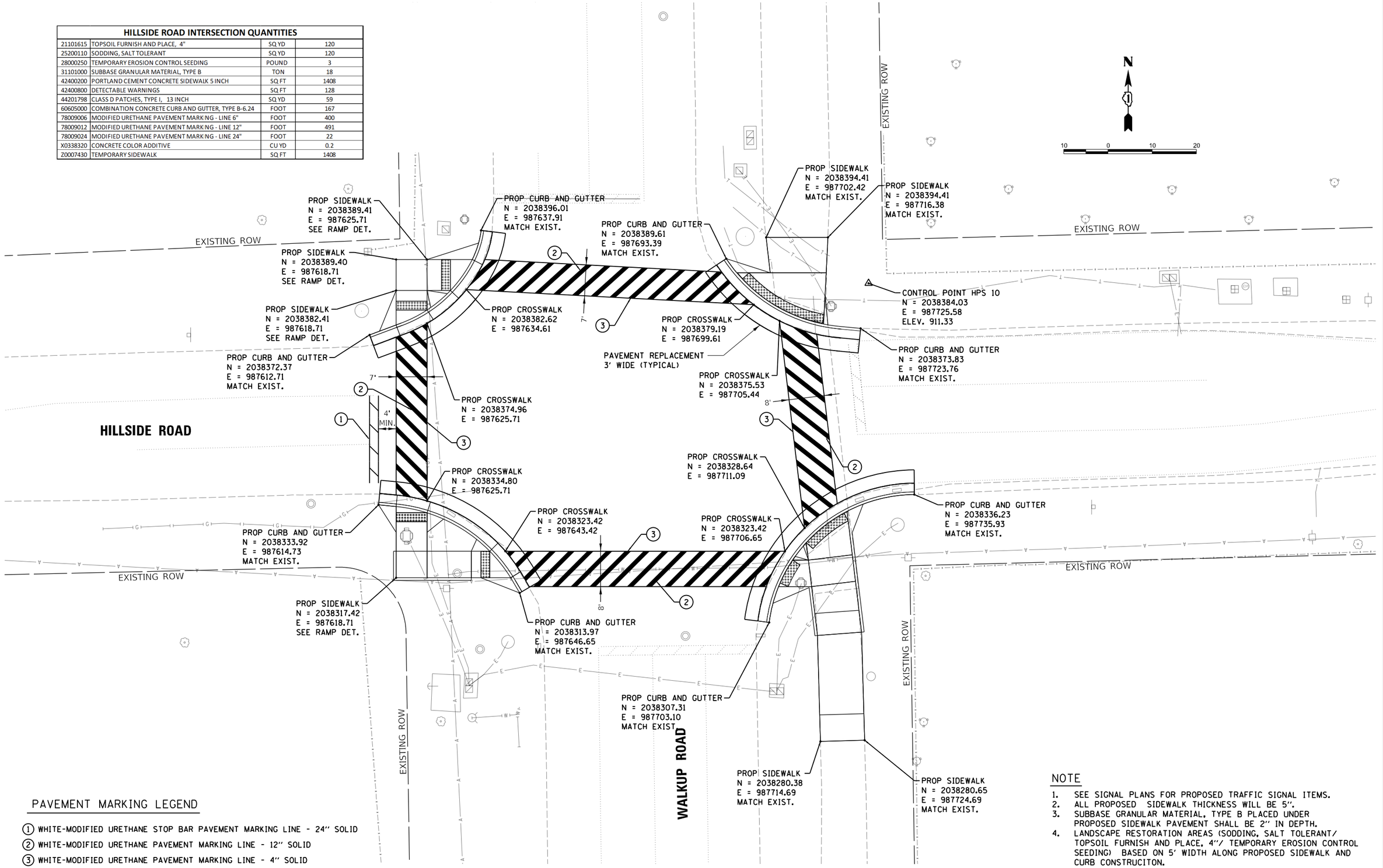
PLEASANT HILL ROAD / WALKUP ROAD
REMOVAL SHEET

SCALE: 1"=10' | SHEET OF SHEETS | STA. | TO STA.

HPS1

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	8
	19L0111	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			

HILLSIDE ROAD INTERSECTION QUANTITIES			
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	120
25200110	SODDING, SALT TOLERANT	SQ YD	120
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	3
31101000	SUBBASE GRANULAR MATERIAL, TYPE B	TON	18
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	1408
42400800	DETECTABLE WARNINGS	SQ FT	128
44201798	CLASS D PATCHES, TYPE I, 13 INCH	SQ YD	59
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	167
78009006	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	FOOT	400
78009012	MODIFIED URETHANE PAVEMENT MARKING - LINE 12"	FOOT	491
78009024	MODIFIED URETHANE PAVEMENT MARKING - LINE 24"	FOOT	22
X0338320	CONCRETE COLOR ADDITIVE	CU YD	0.2
Z0007430	TEMPORARY SIDEWALK	SQ FT	1408



PAVEMENT MARKING LEGEND

1. WHITE-MODIFIED URETHANE STOP BAR PAVEMENT MARKING LINE - 24" SOLID
2. WHITE-MODIFIED URETHANE PAVEMENT MARKING LINE - 12" SOLID
3. WHITE-MODIFIED URETHANE PAVEMENT MARKING LINE - 4" SOLID

NOTE

1. SEE SIGNAL PLANS FOR PROPOSED TRAFFIC SIGNAL ITEMS.
2. ALL PROPOSED SIDEWALK THICKNESS WILL BE 5".
3. SUBBASE GRANULAR MATERIAL, TYPE B PLACED UNDER PROPOSED SIDEWALK PAVEMENT SHALL BE 2" IN DEPTH.
4. LANDSCAPE RESTORATION AREAS (SODDING, SALT TOLERANT/ TOPSOIL FURNISH AND PLACE, 4"/ TEMPORARY EROSION CONTROL SEEDING) BASED ON 5' WIDTH ALONG PROPOSED SIDEWALK AND CURB CONSTRUCITON.

HPSI

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	DRAWN - JAP	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 3/16/2023	DATE - -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HILLSIDE ROAD / WALKUP ROAD
PLAN SHEET

SCALE: 1"=10' | SHEET OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	9
	19L0111	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			

DESIGNED
DRAWN
REVIEWED

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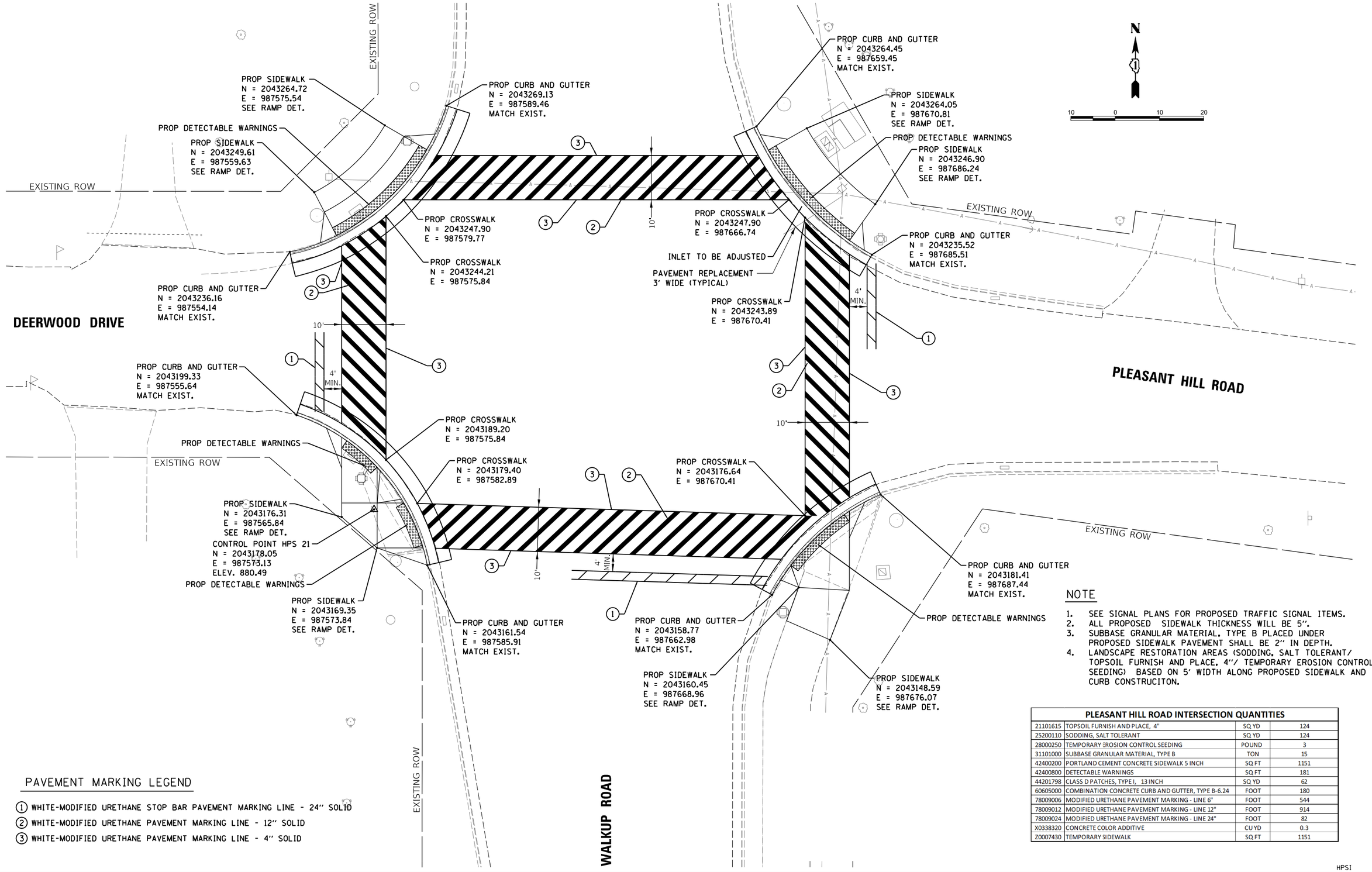

PAVEMENT MARKING LEGEND

1. WHITE-MODIFIED URETHANE STOP BAR PAVEMENT MARKING LINE - 24" SOLID
2. WHITE-MODIFIED URETHANE PAVEMENT MARKING LINE - 12" SOLID
3. WHITE-MODIFIED URETHANE PAVEMENT MARKING LINE - 4" SOLID

NOTE

1. SEE SIGNAL PLANS FOR PROPOSED TRAFFIC SIGNAL ITEMS.
2. ALL PROPOSED SIDEWALK THICKNESS WILL BE 5".
3. SUBBASE GRANULAR MATERIAL, TYPE B PLACED UNDER PROPOSED SIDEWALK PAVEMENT SHALL BE 2" IN DEPTH.
4. LANDSCAPE RESTORATION AREAS (SODDING, SALT TOLERANT/ TOPSOIL FURNISH AND PLACE, 4"/ TEMPORARY EROSION CONTROL SEEDING) BASED ON 5' WIDTH ALONG PROPOSED SIDEWALK AND CURB CONSTRUCITON.

PLEASANT HILL ROAD INTERSECTION QUANTITIES

21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	124
25200110	SODDING, SALT TOLERANT	SQ YD	124
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	3
31101000	SUBBASE GRANULAR MATERIAL, TYPE B	TON	15
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	1151
42400800	DETECTABLE WARNINGS	SQ FT	181
44201798	CLASS D PATCHES, TYPE I, 13 INCH	SQ YD	62
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	180
78009006	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	FOOT	544
78009012	MODIFIED URETHANE PAVEMENT MARKING - LINE 12"	FOOT	914
78009024	MODIFIED URETHANE PAVEMENT MARKING - LINE 24"	FOOT	82
X0338320	CONCRETE COLOR ADDITIVE	CU YD	0.3
Z0007430	TEMPORARY SIDEWALK	SQ FT	1151

DESIGNED
DRAWN
REVIEWED

MODEL: Pleasant Hill Road
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLEASANT HILL ROAD / WALKUP ROAD
PLAN SHEET

SCALE: 1"=10' | SHEET OF SHEETS | STA. | TO STA.

HPSI

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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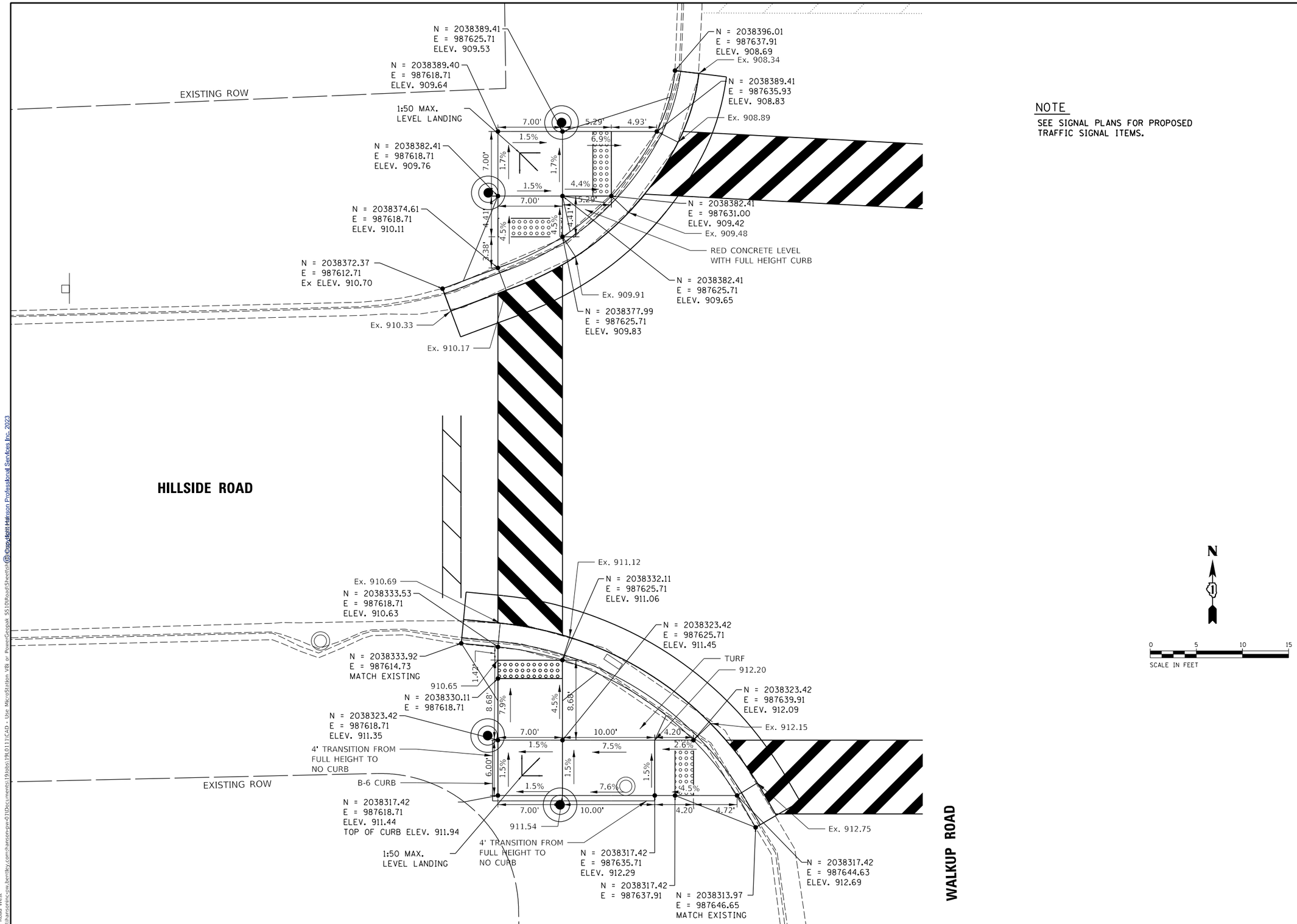
	ILLINOIS FED. AID PROJECT			



NOTE

SEE SIGNAL PLANS FOR PROPOSED TRAFFIC SIGNAL ITEMS.

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DESIGNED
DRAWN
REVIEWED

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PLOT DATE = 2/17/2023	DATE - -	REVISED -	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HILLSIDE ROAD / WALKUP ROAD WEST RAMPS
RAMP GRADING SHEET

SCALE: 1"=5' | SHEET OF SHEETS | STA. | TO STA.

HPSI

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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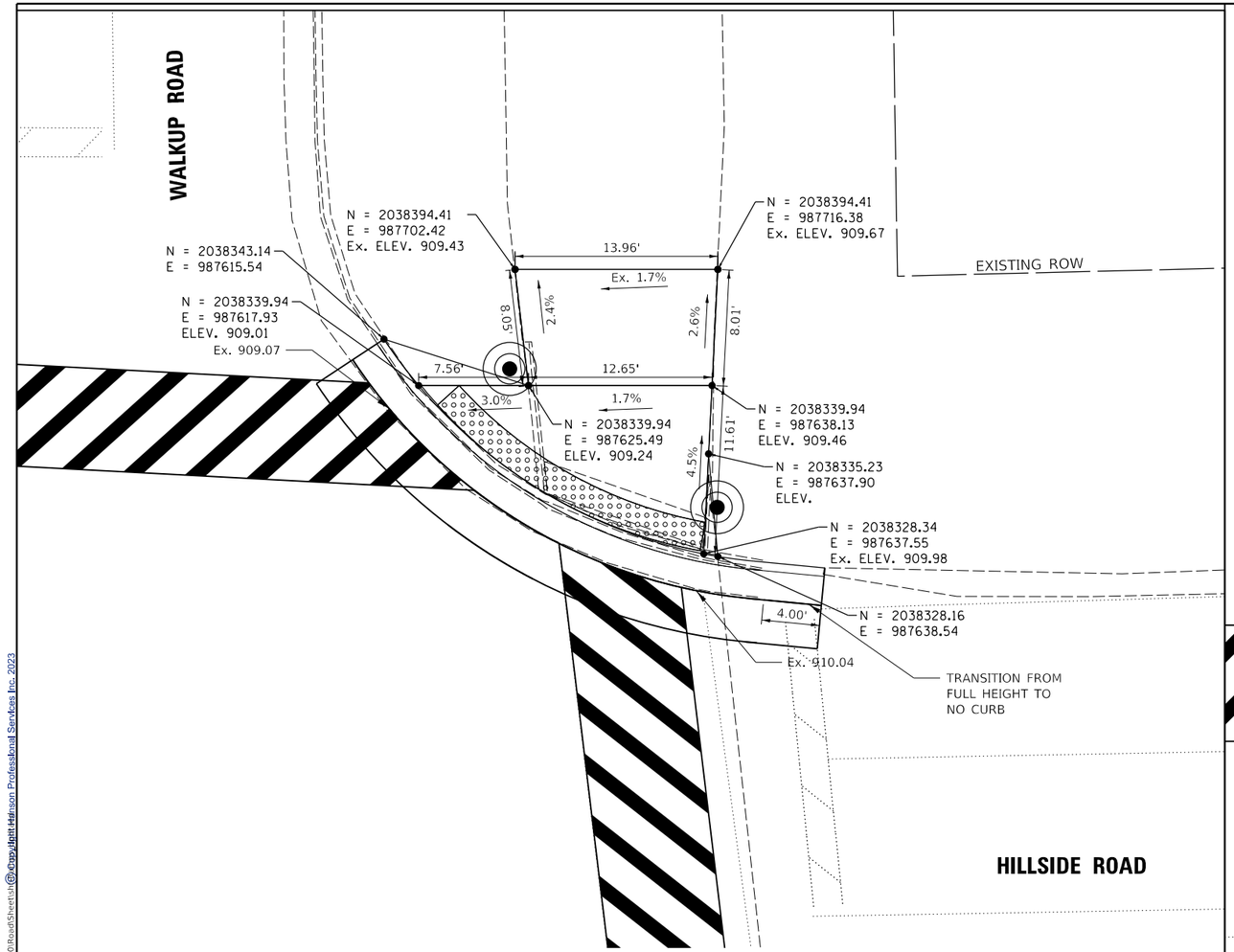
	19L0111	CONTRACT NO.		61J51
		ILLINOIS	FED. AID PROJECT	



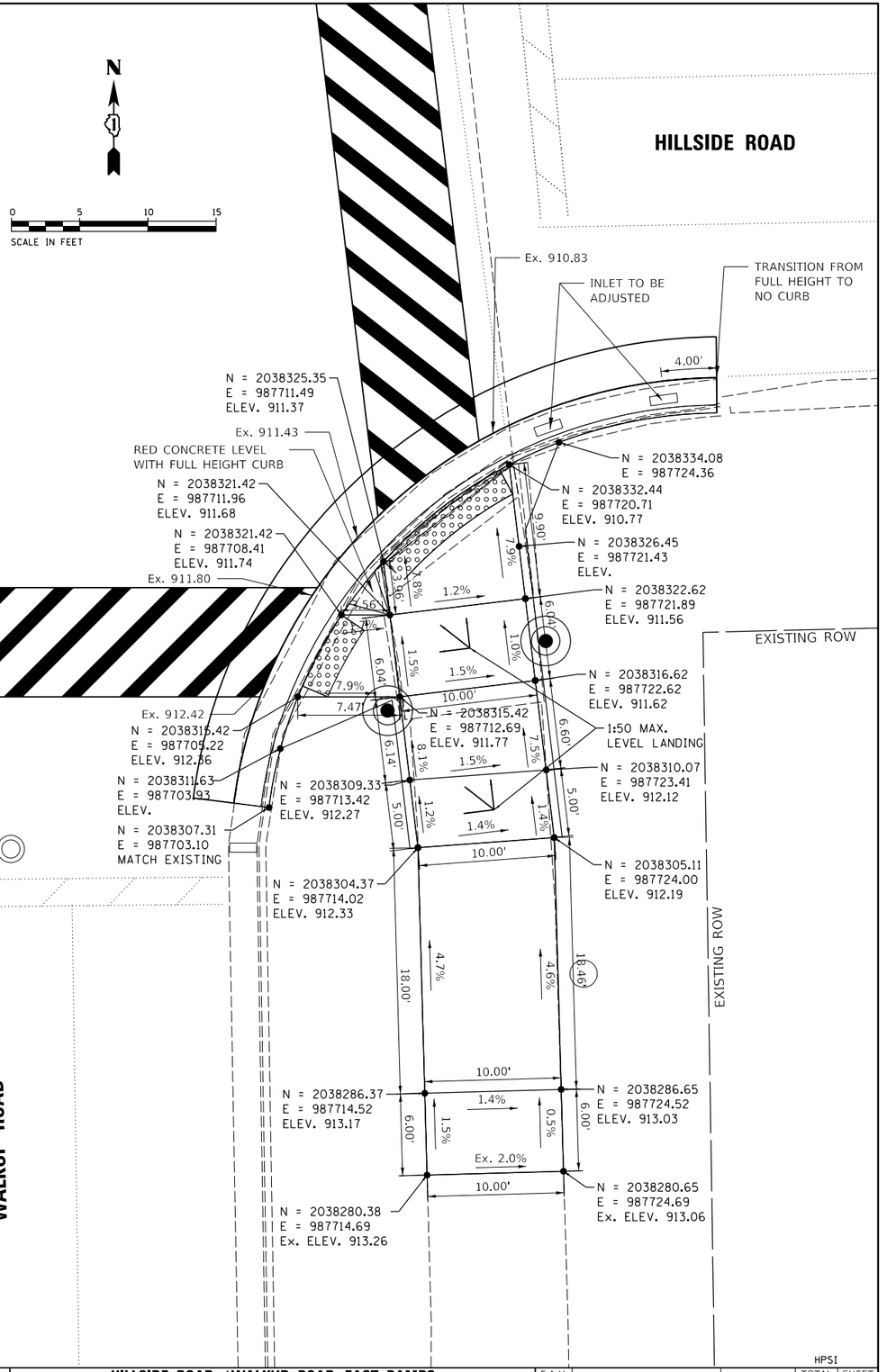
NOTE

SEE SIGNAL PLANS FOR PROPOSED
TRAFFIC SIGNAL ITEMS.

N

0 5 10 15

SCALE IN FEET



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HILLSIDE ROAD / WALKUP ROAD EAST RAMPS
RAMP GRADING SHEET

SCALE: 1"=5' | SHEET OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	12
	19L0111	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			

DESIGNED
DRAWN
REVIEWED

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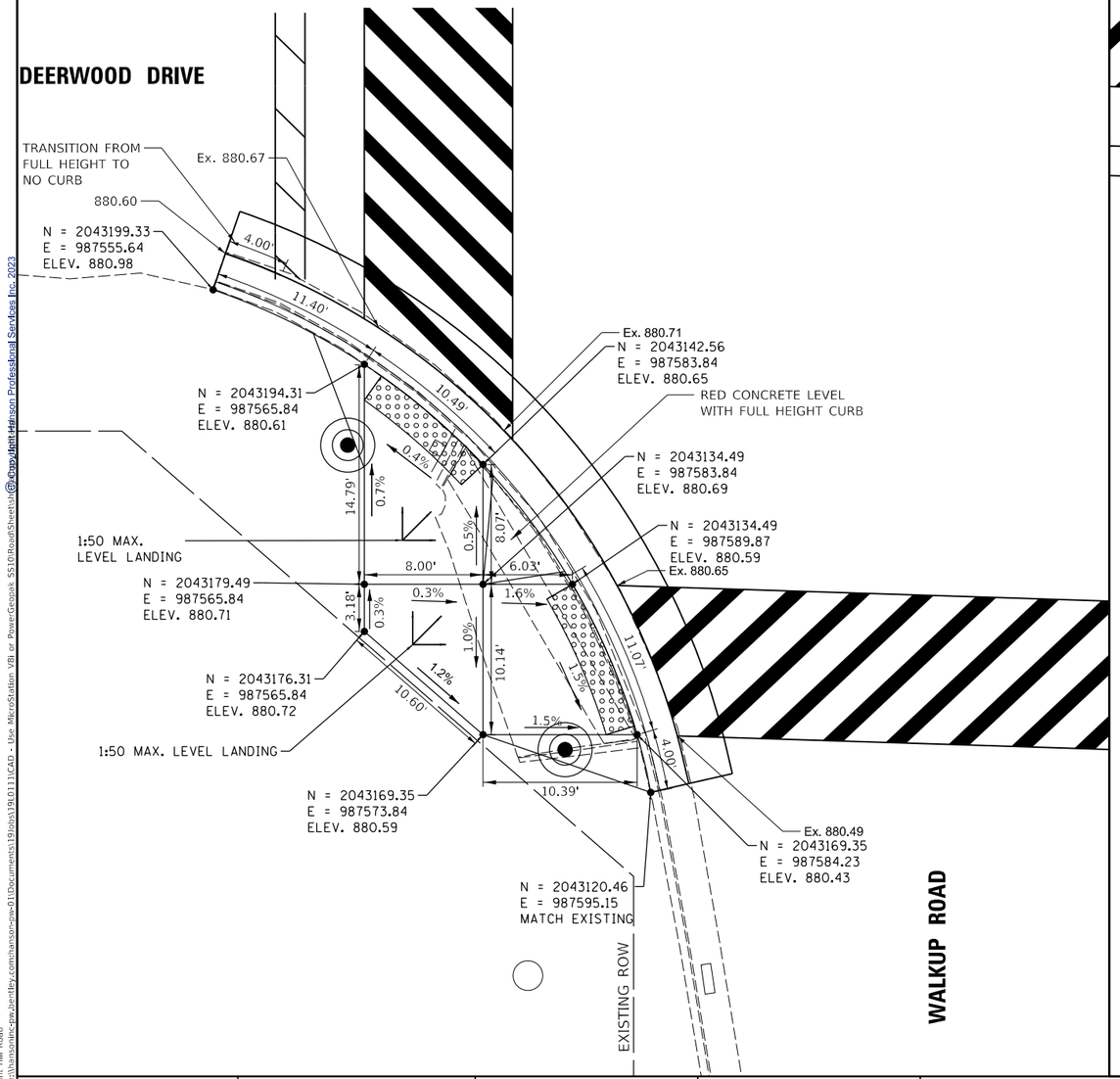
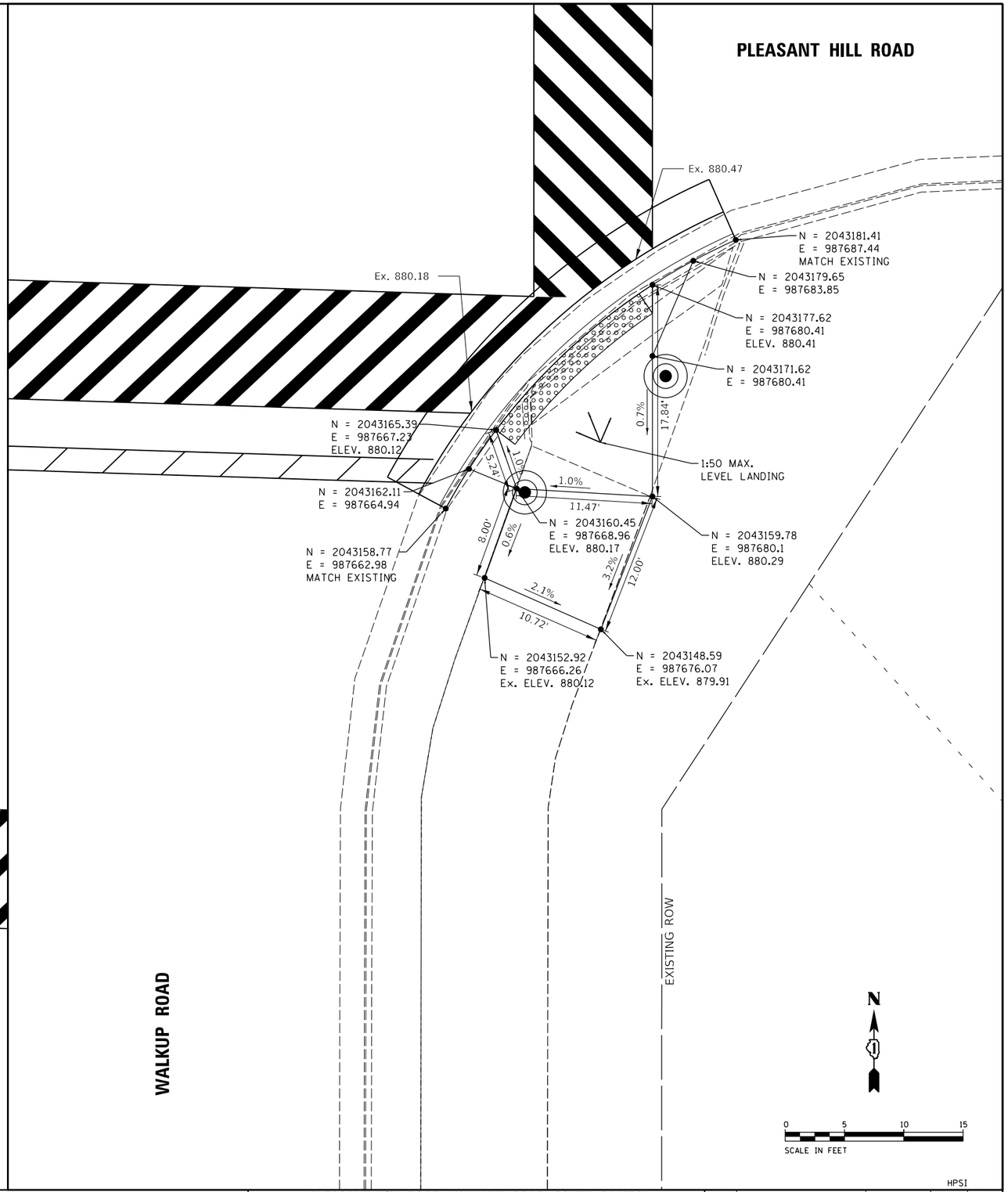
NOTE

SEE SIGNAL PLANS FOR PROPOSED TRAFFIC SIGNAL ITEMS.





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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLEASANT HILL ROAD / WALKUP ROAD SOUTH RAMPS
RAMP GRADING SHEET

SCALE: 1"=5' | SHEET OF SHEETS | STA. | TO STA.

HPSI

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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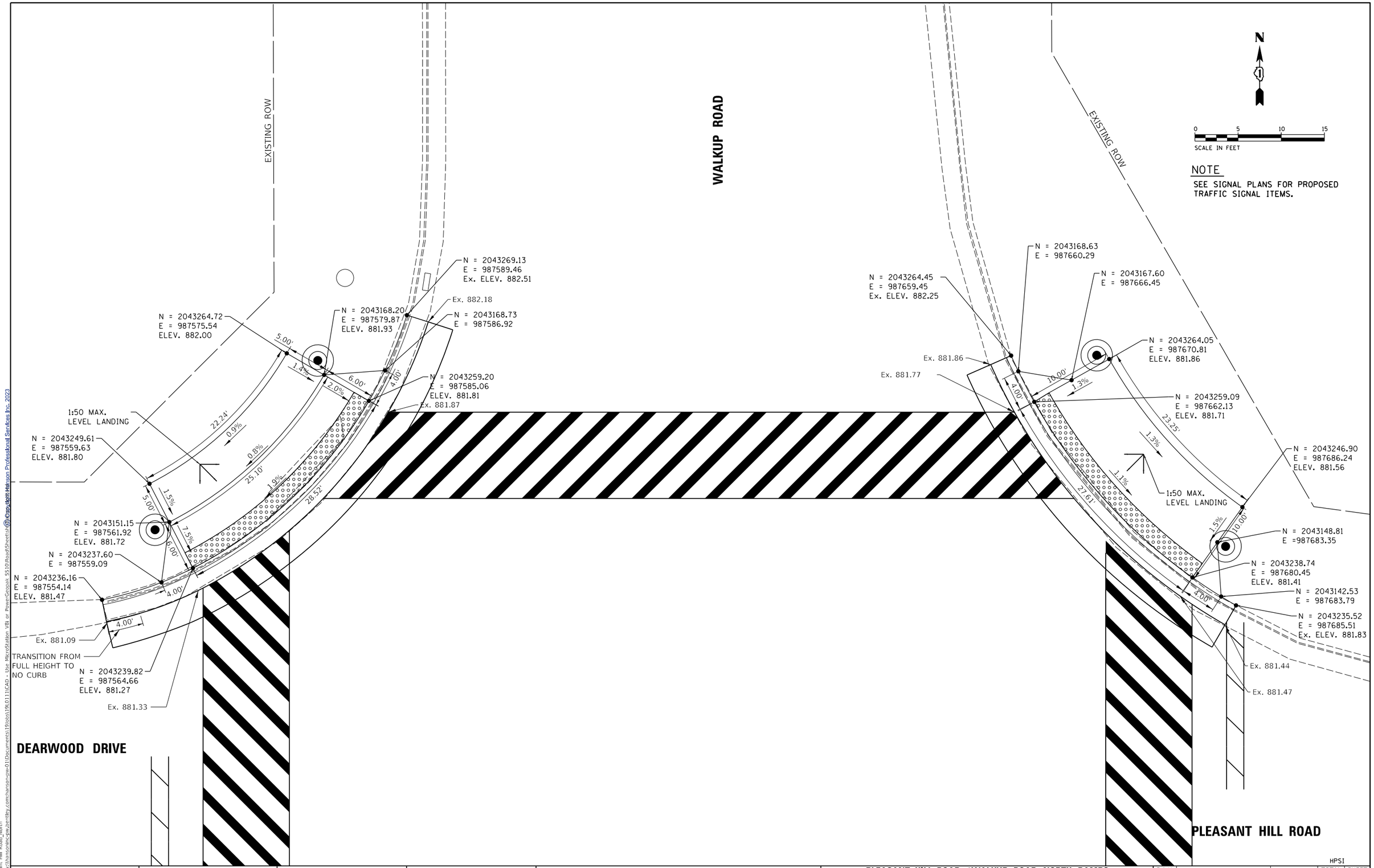
	19L0111	CONTRACT NO. 61J51		
	ILLINOIS	FED. AID PROJECT		



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DESIGNED	
DRAWN	
REVIEWED	

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PLOT DATE = 2/17/2023	DATE - -	REVISED -	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLEASANT HILL ROAD / WALKUP ROAD NORTH RAMPS
RAMP GRADING SHEET

SCALE: 1"=5' | SHEET OF SHEETS | STA. | TO STA.

HPSI

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	14
	19L0111	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			

TRAFFIC SIGNAL LEGEND

(NOT TO SCALE)

ITEM	EXISTING	PROPOSED
CONTROLLER CABINET		
COMMUNICATION CABINET	CC	CC
MASTER CONTROLLER	MC	MC
MASTER MASTER CONTROLLER	MMC	MMC
UNINTERRUPTABLE POWER SUPPLY		
SERVICE INSTALLATION -(P) POLE MOUNTED	P	P
SERVICE INSTALLATION -(G) GROUND MOUNTED -(GM) GROUND MOUNTED METERED	G GM	G GM
TELEPHONE CONNECTION	ET	T
STEEL MAST ARM ASSEMBLY AND POLE		
ALUMINUM MAST ARM ASSEMBLY AND POLE		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE		
SIGNAL POST -(BM) BARREL MOUNTED - TEMPORARY		BM
WOOD POLE		
GUY WIRE		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD OPTICALLY PROGRAMMED	P P	P P
FLASHER INSTALLATION -(FS) SOLAR POWERED	F FS F FS	F FS F FS
PEDESTRIAN SIGNAL HEAD		
PEDESTRIAN PUSH BUTTON -(APS) ACCESSIBLE PEDESTRIAN PUSH BUTTON	APS	APS
RADAR DETECTION SENSOR	R	R
VIDEO DETECTION CAMERA	V	V
RADAR/VIDEO DETECTION ZONE		
PAN, TILT, ZOOM (PTZ) CAMERA	PTZ	PTZ
EMERGENCY VEHICLE LIGHT DETECTOR		
CONFIMATION BEACON		
WIRELESS INTERCONNECT		
WIRELESS INTERCONNECT RADIO REPEATER	ERR	RR

ITEM	EXISTING	PROPOSED
HANDHOLE -SQUARE -ROUND		
HEAVY DUTY HANDHOLE -SQUARE -ROUND	H	H
DOUBLE HANDHOLE		
JUNCTION BOX	J	
RAILROAD CANTILEVER MAST ARM		
RAILROAD FLASHING SIGNAL		
RAILROAD CROSSING GATE		
RAILROAD CROSSBUCK		
RAILROAD CONTROLLER CABINET	RC	RC
UNDERGROUND CONDUIT (UC), GALVANIZED STEEL		
TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE		
SYSTEM ITEM	S	SP
INTERSECTION ITEM	I	IP
REMOVE ITEM		R
RELOCATE ITEM		RL
ABANDON ITEM		A
CONTROLLER CABINET AND FOUNDATION TO BE REMOVED		RCF
MAST ARM POLE AND FOUNDATION TO BE REMOVED		RMF
SIGNAL POST AND FOUNDATION TO BE REMOVED		RPF
DETECTOR LOOP, TYPE I		
PREFORMED DETECTOR LOOP	P P	P P
SAMPLING (SYSTEM) DETECTOR	S S	S S
INTERSECTION AND SAMPLING (SYSTEM) DETECTOR	IS IS	IS IS
QUEUE AND SAMPLING (SYSTEM) DETECTOR	QS QS	QS QS
WIRELESS DETECTOR SENSOR	W	W
WIRELESS ACCESS POINT		
LEFT TURN YIELD ON FLASHING YELLOW ARROW (R10-1109)		
STREET NAME SIGN LED		

ITEM	EXISTING	PROPOSED
SIGNAL HEAD -(P) PROGRAMMABLE SIGNAL HEAD	P	P
SIGNAL HEAD WITH BACKPLATE -(P) PROGRAMMABLE SIGNAL HEAD -(RB) RETROREFLECTIVE BACKPLATE	P RB	P RB
PEDESTRIAN SIGNAL HEAD AT RAILROAD INTERSECTIONS		
PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER	C D	C D
ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"		
NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED	5	5
GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)	1#6	1#6
ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1/C	1	1
COAXIAL CABLE	C	C
VENDOR CABLE	V	V
COPPER INTERCONNECT CABLE, NO. 18, 3 PAIR TWISTED, SHIELDED	6#18	6#18
FIBER OPTIC CABLE -NO. 62.5/125, MM12F -NO. 62.5/125, MM12F SM12F -NO. 62.5/125, MM12F SM24F	12F 24F 36F	12F 24F 36F
GROUND ROD -(C) CONTROLLER -(M) MAST ARM -(P) POST -(S) SERVICE	C M P S	C M P S

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PLOT DATE = 3/4/2019	DATE - 9/29/2016	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

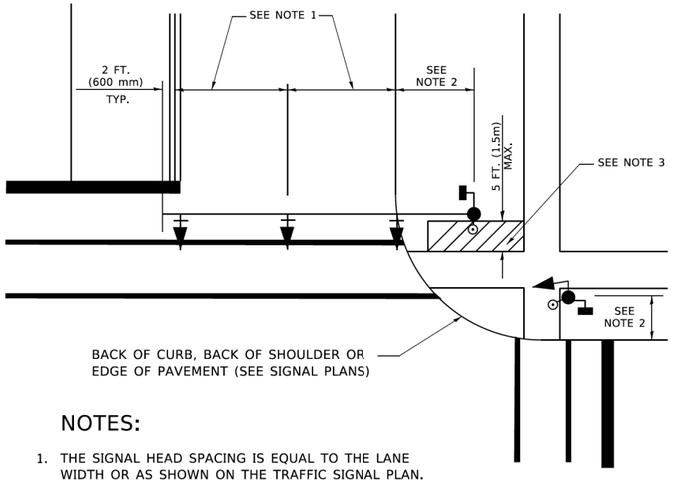
SCALE: NONE | SHEET 1 OF 7 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	15
	TS-05	CONTRACT NO. 61J51		
		ILLINOIS FED. AID PROJECT		

ts05.dgn 3/4/2019 11:21:59 AM User:footemj

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

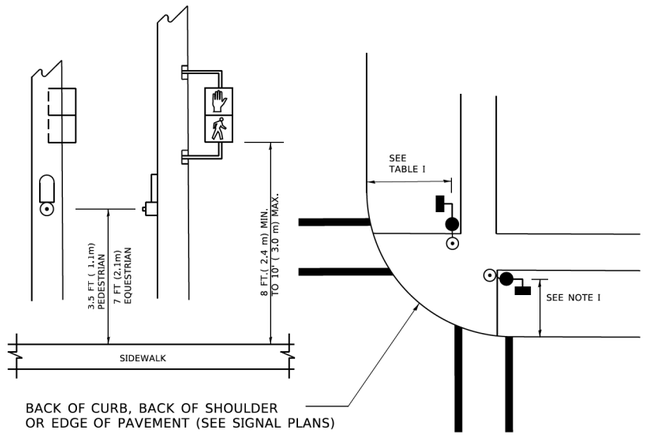
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



NOTES:

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

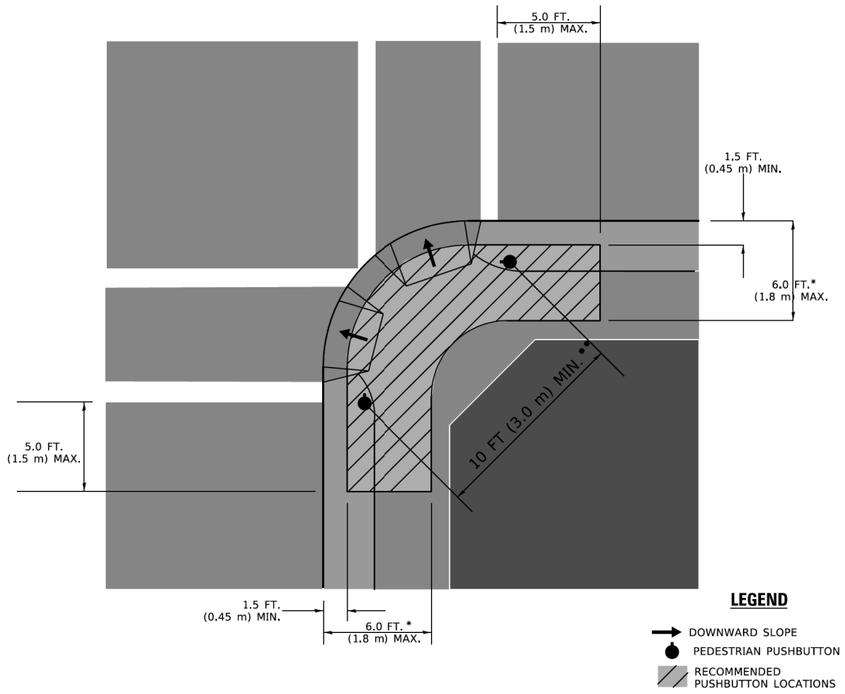
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

RECOMMENDED PUSHBUTTON LOCATIONS



* WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.

** WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

TRAFFIC SIGNAL EQUIPMENT OFFSET

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

NOTES:

1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TOTHE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 3 OF 7 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	16
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	ILLINOIS	FED. AID PROJECT		

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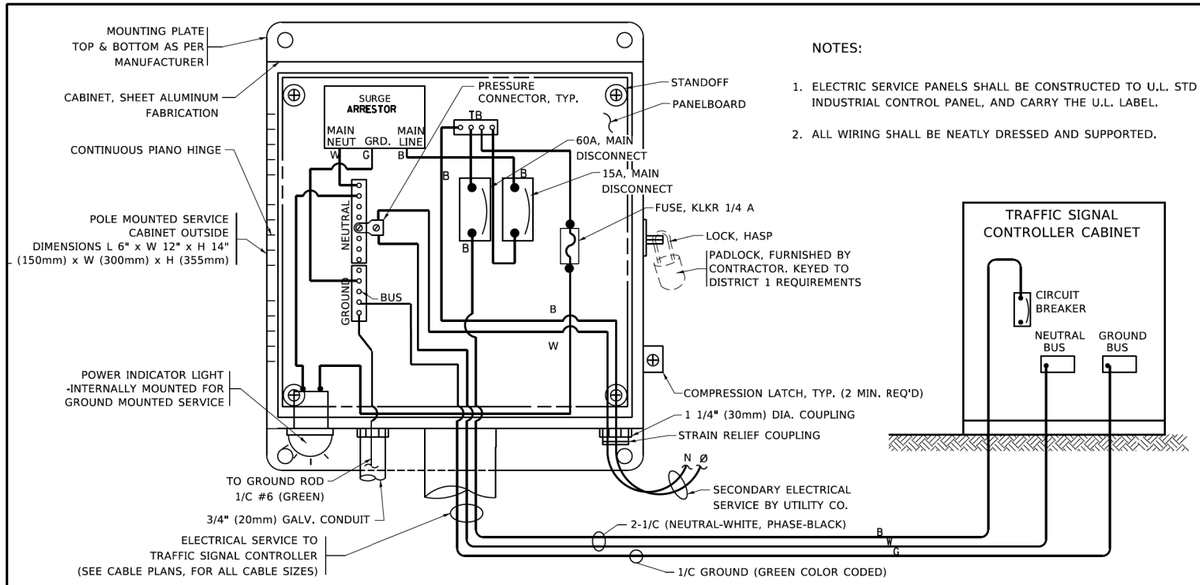


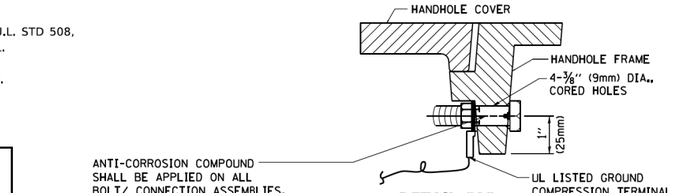
NOTES:

1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

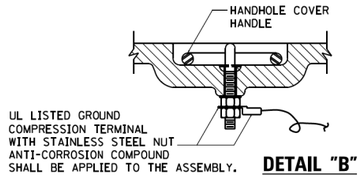
ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)



DETAIL "A"

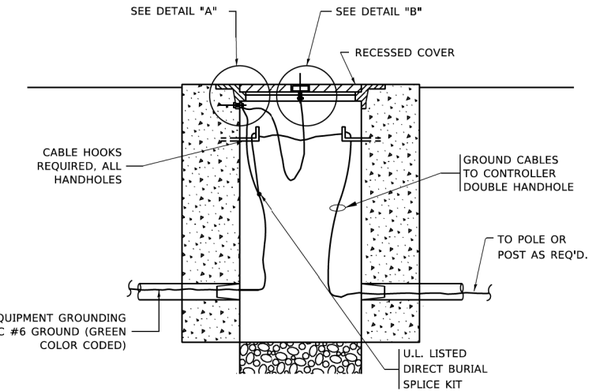


DETAIL "B"

NOTES:

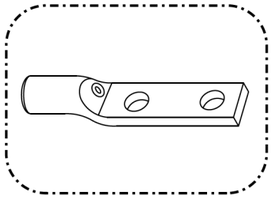
GROUNDING SYSTEM

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC,). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.

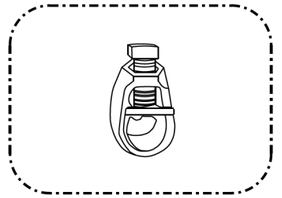


HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



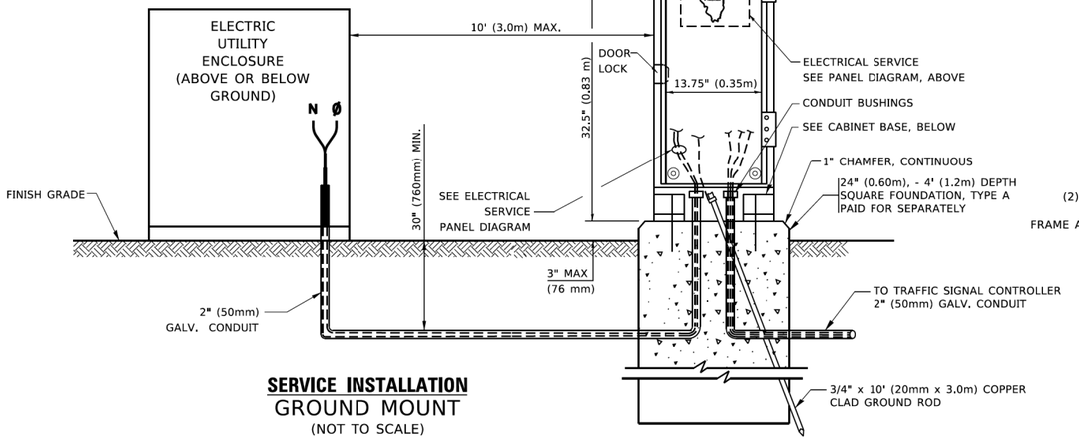
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



¾" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

NOTES:

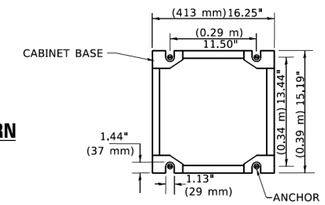
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



SERVICE INSTALLATION

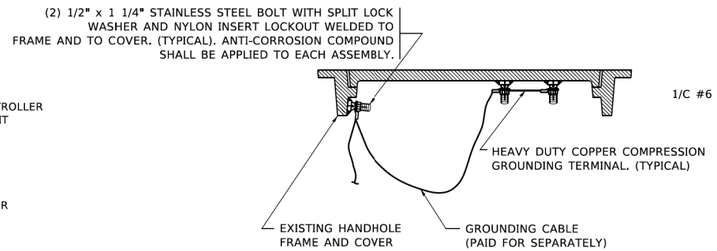
GROUND MOUNT

(NOT TO SCALE)



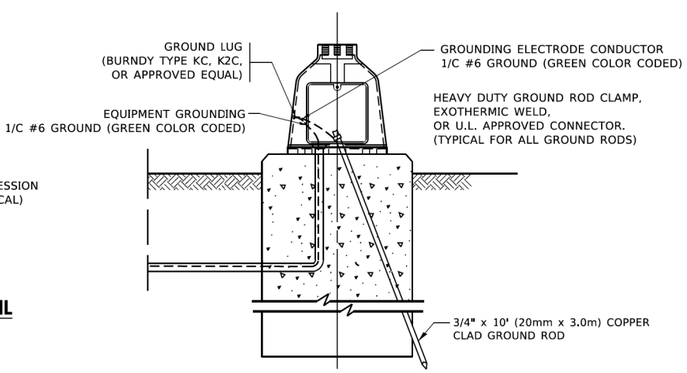
CABINET – BASE BOLT PATTERN

(NOT TO SCALE)



EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



MAST ARM POLE /POST–GROUNDING DETAIL

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 4 OF 7 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	17
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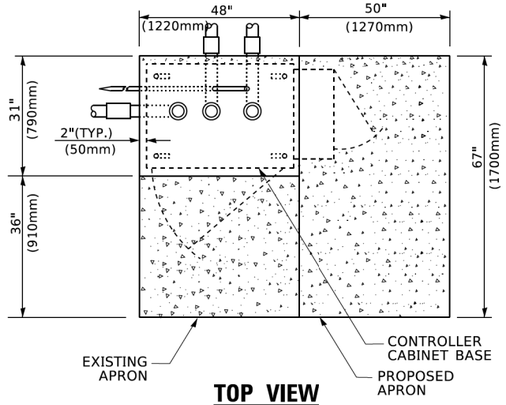
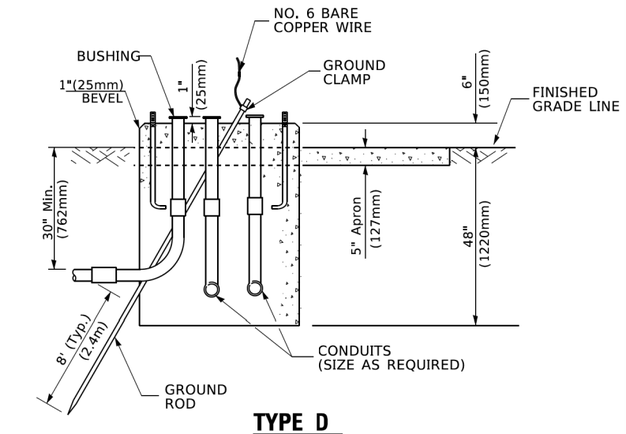
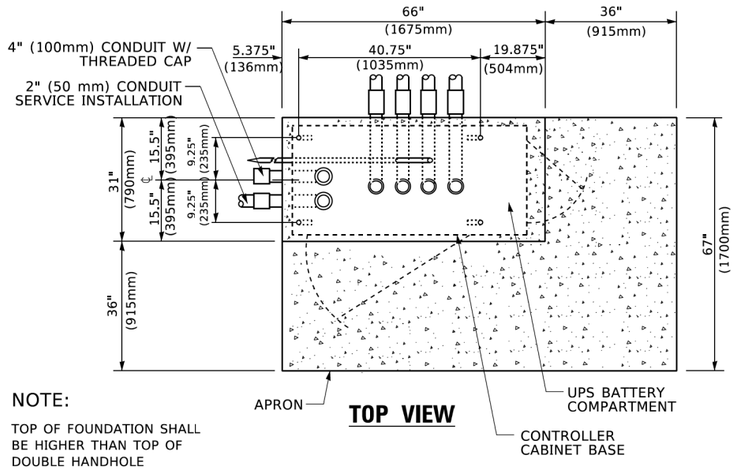


TOP VIEW



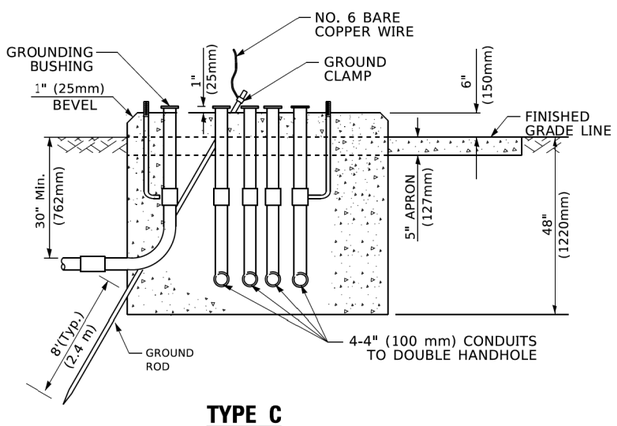
TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



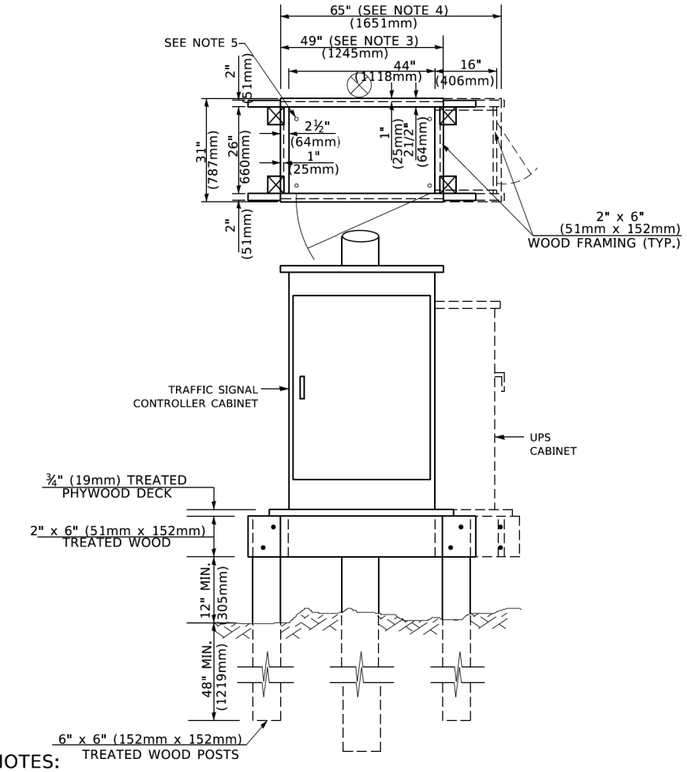
NOTE:

TOP OF FOUNDATION SHALL BE HIGHER THAN TOP OF DOUBLE HANDHOLE

TOP VIEW



TYPE C
FOR GROUND MOUNTED
SUPER P (TYPE IV) AND SUPER R (TYPE V)
CONTROLLER CABINETS



NOTES:

1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED
2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION..

TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

CABLE SLACK

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

DEPTH OF FOUNDATION

Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

NOTES:

1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & structures should be contacted for a revised design if other conditions are encountered.
2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations
4. For mast arm assemblies with dual arms refer to state standard 878001..

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 5 OF 7 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	18
	TS-05	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			

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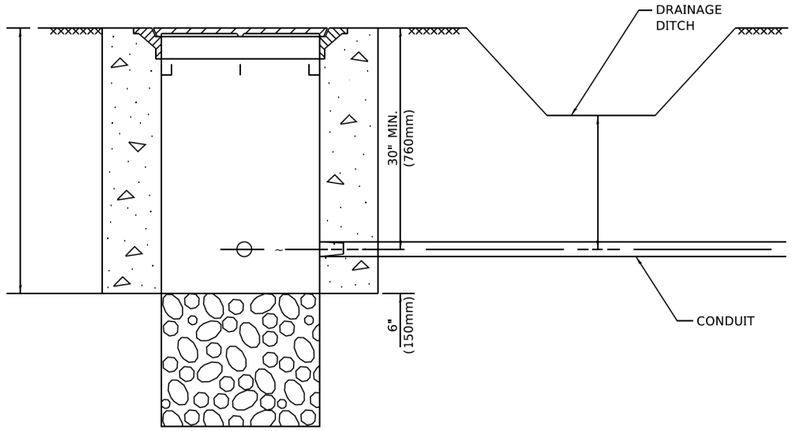
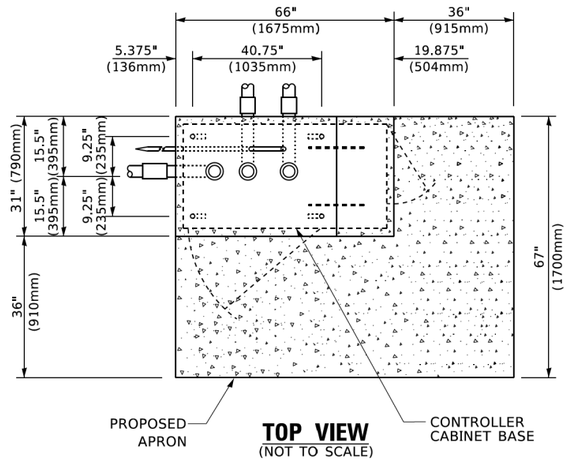


NOTES:

1. CONDUIT DEPTH SHALL BE A MINIMUM OF 30" (760mm) BELOW THE BOTTOM OF THE DRAINAGE DITCH OR ANY SLOPING GROUND
2. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL CONDUIT PLACED UNDER ROADWAY PAVEMENT, MULTI-USE PATHS, SIDEWALKS AND SOIL SURFACES.
3. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL HANDHOLES, HEAVY DUTY HANDHOLES AND DOUBLE HANDHOLES.

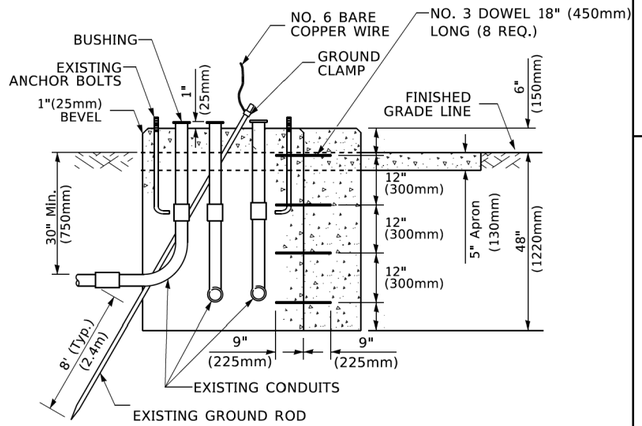
HANDHOLE WITH MINIMUM CONDUIT DEPTH

(NOT TO SCALE)



TOP VIEW

(NOT TO SCALE)



MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION

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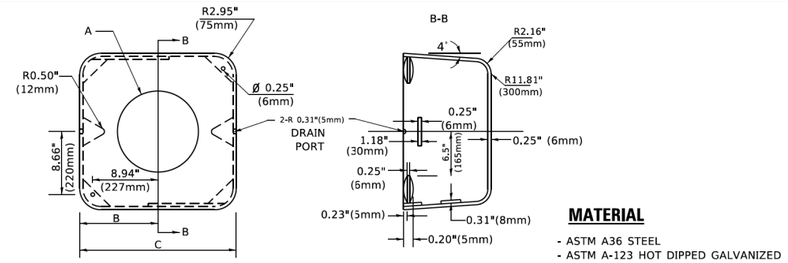


MATERIAL

- ASTM A36 STEEL
- ASTM A-123 HOT DIPPED GALVANIZED

A	B	C	HEIGHT	WEIGHT
VARIES	9.5"(241mm)	19"(483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIES	10.75"(273mm)	21.5"(546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIES	13.0"(330mm)	26"(660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIES	18.5"(470mm)	37"(940mm)	7" (178mm) - 12" (300mm)	126 lbs (57 kg)

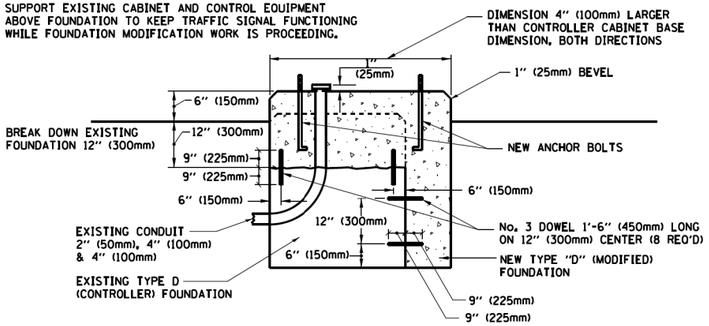
SHROUD

NOTES:

1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

NOTE:

SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE "D" FOUNDATION

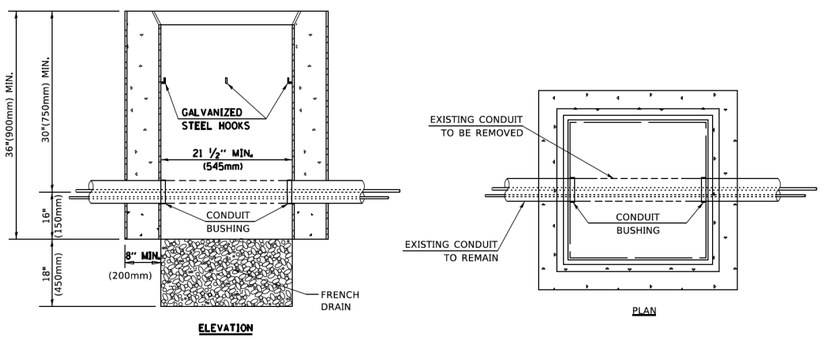
POST CAP MOUNT **MAST ARM MOUNT**

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	¾"(19 mm) CLOSE NIPPLE
7	¾"(19 mm) LOCKNUT
8	¾"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

NOTES:

1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
   ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
   ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4 "(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



NOTES:

1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCLUDED WITH THE COST OF THE HANDHOLE.

HANDHOLE TO INTERCEPT EXISTING CONDUIT

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	DRAWN -	REVISED -
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PLOT DATE = 3/4/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 6 OF 7 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	19
	TS-05	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			

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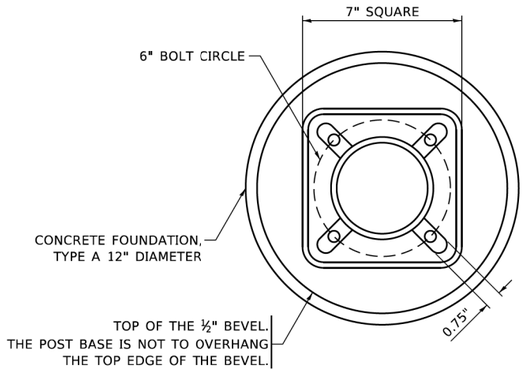
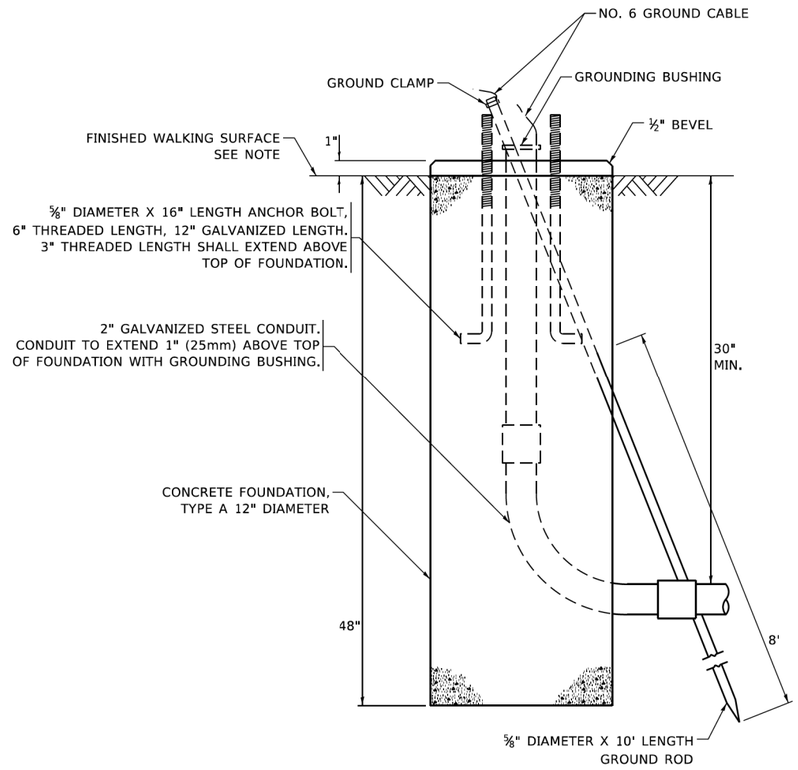


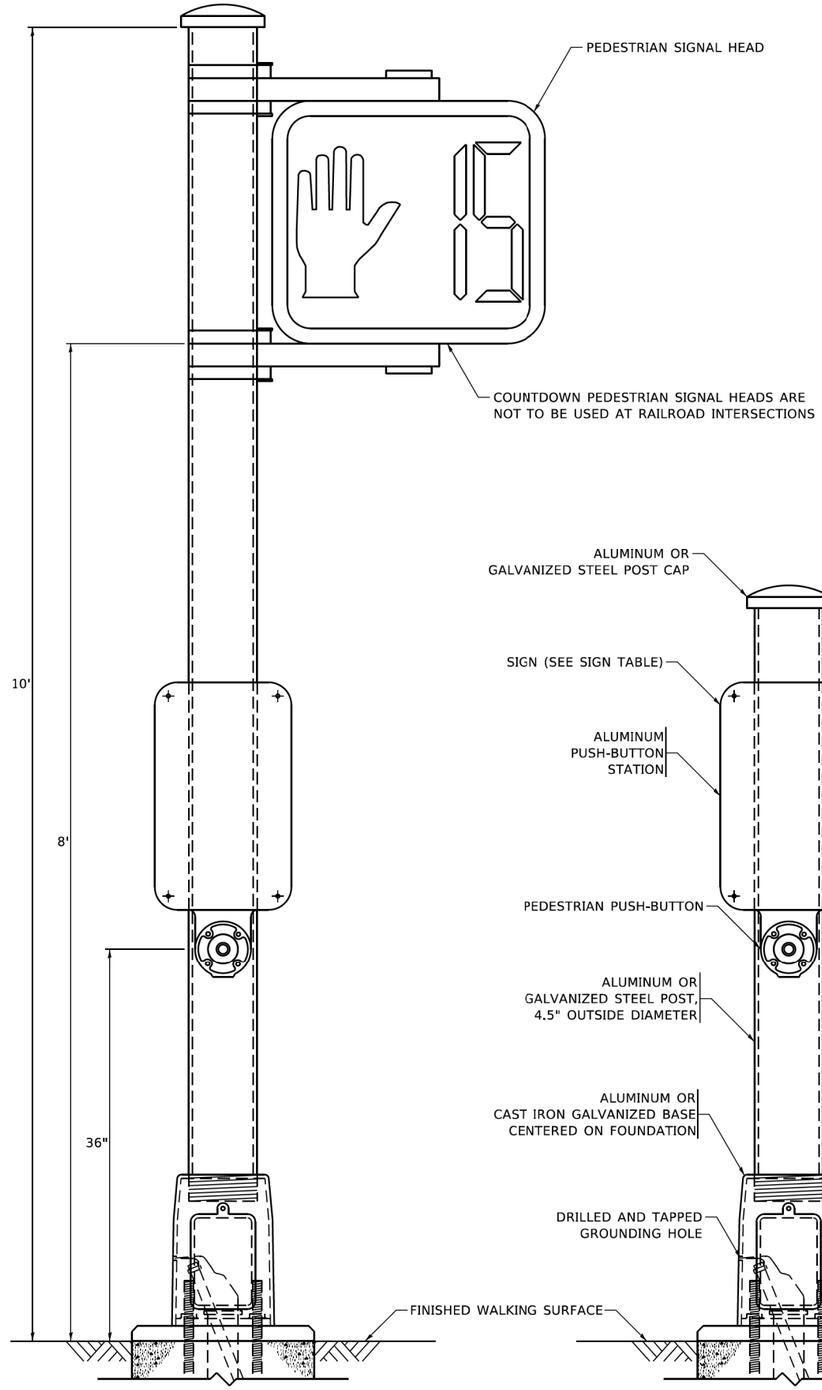
BOLT PATTERN

NOTE:

1. IF THE PEDESTRIAN SIGNAL POST FOUNDATION IS INSTALLED WITHIN OR BEHIND A BARRIER CURB, THE TOP OF THE FOUNDATION SHALL BE INSTALLED FLUSH WITH THE TOP OF THE BARRIER CURB.



CONCRETE FOUNDATION, TYPE A 12–INCH DIAMETER



PEDESTRIAN SIGNAL POST, 10 FT.

PEDESTRIAN SIGNAL POST, 5 FT.

SIGN TABLE

SIGN	DIMENSIONS
R10-3b (RAILROAD ONLY)	9" X 12"
R10-3d (RAILROAD ONLY)	9" X 12"
R10-3e	9" X 12"

NOTES:

1. THE SIGN PANELS SHALL BE TYPE AP SHEETING.
2. THE ARROW ON SIGNS FOR PUSH-BUTTONS SERVING TWO DIRECTIONS ON THE SAME PHASE SHALL BE BI-DIRECTIONAL.
3. THE SIGN FOR DUAL-CALL PUSH-BUTTONS SHALL HAVE NO ARROW.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 7 OF 7 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	20
	TS–05	CONTRACT NO. 61J51		
		ILLINOIS FED. AID PROJECT		

TRAFFIC SIGNAL NOTES:

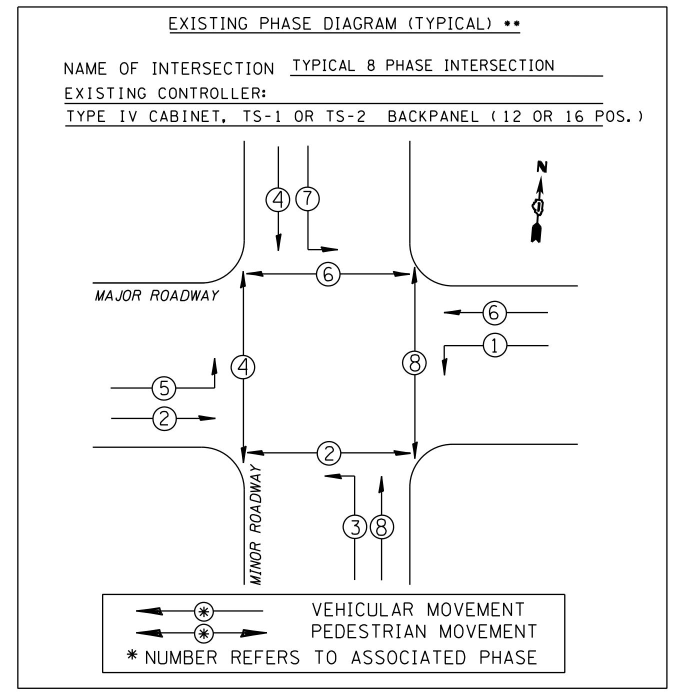
1. THE REMOVAL OF EXISTING ELECTRIC CABLE IN CONDUIT SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF "REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT". REMOVAL OF EXISTING ELECTRICAL CONDUIT SHALL BE IN ACCORDANCE WITH ARTICLE 895.
2. THE CONTRACTOR SHALL FIELD VERIFY THE PRECISE LOCATIONS AND LAYOUT OF PROPOSED SIGNAL MAST ARMS, POLES, CONTROLLERS, HANDHOLES, AND FOUNDATIONS AND VERIFY ALL EXISTING UTILITIES, OVERHEAD AND UNDERGROUND, PRIOR TO ORDERING MATERIALS, OR PROCEEDING WITH CONSTRUCTION.
3. ALL TRAFFIC SIGNAL SECTIONS SHALL HAVE 12" SINGLE LED LENSES.
4. ALL PEDESTRIAN SECTIONS SHALL HAVE 16" LENSES WITH A MAN/HAND OVERLAY AND COUNTDOWN TIMER.
5. THE RED SECTIONS OF THE SIGNAL HEADS SHARING THE SAME MAST ARM SHALL BE LEVEL WITH ONE ANOTHER AND MAINTAIN A 17' MINIMUM CLEARANCE FROM THE HIGHEST POINT OF THE ROADWAY.
6. THE PROPOSED MAST ARM MOUNTED TRAFFIC SIGNAL HEADS SHALL BE MOUNTED DIRECTLY OVER THE CENTER OF THEIR RESPECTIVE LANES, UNLESS OTHERWISE DIRECTED.
7. ALL TRAFFIC SIGNAL POSTS ARE TO BE GALVANIZED STEEL.
8. PROPOSED HANDHOLES SHALL BE CAST IN PLACE CONCRETE HANDHOLES.
9. THE HANDHOLES SHALL BE CONSTRUCTED SO THAT THE TOP OF THE FRAME WILL BE FLUSH WITH THE SURFACE OF THE MEDIAN, SIDEWALK, CURB, OR GROUND LINE.
10. THE LOCATIONS FOR HANDHOLES, TRAFFIC SIGNAL POST FOUNDATIONS, AND MAST ARM FOUNDATIONS ARE PROVIDED FOR REFERENCE ONLY. THE RESIDENT ENGINEER SHALL BE NOTIFIED FOR LOCATION VERIFICATION BEFORE INSTALLATION.
11. ALL SURPLUS MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS.
12. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR PLACING CONDUIT AT GREATER THAN 3 FT. OR 36" MINIMUM DEPTH TO AVOID OBSTACLES SUCH AS UNDERGROUND UTILITIES. CONDUIT SHALL NEVER BE INSTALLED AT DEPTH LESS THAN 36" UNLESS APPROVED BY THE ENGINEER IN WRITING.
13. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF UNCOVERING OR HAND DIGGING AROUND UTILITIES AS NECESSARY. THIS COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICES FOR THE CONDUITS OR THE APPROPRIATE PAY ITEM BEING INSTALLED. EXPLORATORY WORK SUCH AS "POT-HOLING" TO EXPOSE EXACT UTILITY LOCATIONS SHALL ALSO BE CONSIDERED INCLUDED IN THE PAY ITEM BEING INSTALLED.
14. ALL TRAFFIC SIGNAL MAST ARMS, POSTS, HANDHOLE LIDS AND RINGS, HANDHOLE FRAMES, CONTROLLER CABINETS, SERVICE RISERS, EXPOSED METALLIC CONDUITS, AND PHOTOCELL RELAYS SHALL BE GROUNDED IN ACCORDANCE WITH NEC REQUIREMENTS.
15. A 1/4" DIAMETER CONTINUOUS NYLON ROPE SHALL BE FURNISHED AND LEFT IN PLACE IN ALL CONDUITS BETWEEN HANDHOLES AND FOUNDATIONS OR CONTROLLER. SHALLL BE PAYED FOR WITH UNIT PRICE FOR CONDUIT
16. ALL EXISTING TIMING, PHASING, AND PREEMPTION ARE TO FUNCTION AS THE EXISTING SIGNALS UNLESS OTHERWISE NOTED.
17. ALL EXISTING CONDUIT IS TO REMAIN AND USED IN PLACE UNLESS OTHERWISE NOTED.
18. ALL PEDESTRIAN PUSH BUTTONS AND ASSOCIATED SIGN ASSEMBLIES SHALL BE PARALLEL TO THE CROSSWALK AND BE A MAXIMUM OF 10 INCHES FROM THE EDGE OF SIDEWALK PATH.
19. EVERY MAST ARM MOUNTED FLASHING YELLOW ARROW SIGNAL HEAD SHALL BE INSTALLED ALONG WITH A "FLASHING YELLOW ARROW" SIGN AS DETAILED ON SIGN PANEL DETAIL THIS SHEET. ALL FLASHING YELLOW ARROW SIGNS SHALL BE INSTALLED WITH SUPPORTING/REINFORCING CHANNELS.
20. ALL LUMINAIRE ARMS ON SIGNAL COMBINATION MAST ASSEMBLIES SHALL BE 25' IN LENGTH UNLESS OTHERWISE APPROVED BY THE ENGINEER.
21. ALL HANDHOLES SPECIFIED TO BE REMOVED SHALL ALSO INCLUDE REQUIRED WORK, AS APPROVED BY THE ENGINEER, ASSOCIATED WITH SEALING THE ABANDONED CONDUITS FROM BOTH ENDS OF THE CONDUIT PATHWAY WITH MORTAR OR OTHER MATERIAL AS APPROVED BY THE ENGINEER. THIS ADDITIONAL WORK SHALL BE INCLUDED IN THE COST OF THE HANDHOLE BEING REMOVED. IF PROPOSED CONDUITS INTERCEPT EXISTING CONDUITS, THE COST ASSOCIATED WITH LABOR AND MATERIALS TO MAKE AN ENGINEER APPROVED CONNECTION SHALL BE COMPENSATED FOR AS PART OF THE PROPOSED CONDUIT BEING INSTALLED.
22. ALL SIGNS ASSOCIATED WITH TRAFFIC SIGNAL HEADS TO BE REMOVED SHALL ALSO BE REMOVED.
23. A DAMPENING PLATE SHALL BE INSTALLED NEAR THE ENDS OF ALL MAST ARMS OVER 41 FEET IN LENGTH. THE COST OF THE DAMPENING PLATE SHALL BE INCLUDED IN THE COST OF THE RESPECTIVE MAST ARM PAY ITEM. SEE DETAIL.
24. THE EXISTING TRAFFIC SIGNALS SHALL REMAIN IN OPERATION UNTIL THE PROPOSED SIGNAL EQUIPMENT AND CABLING IS INSTALLED. THE SIGNAL SHALL BE TAKEN OFFLINE AND REPLACED WITH AN ALL WAY STOP, AT A TIME AND DATE APPROVED BY THE COUNTY, WHILE THE NEW SERVICE CONNECTOIN, CONTROLLER, AND CABINET EQUIPMENT IS INSTALLED AND MADE OPERATIONAL.

CABLE PLAN NOTES

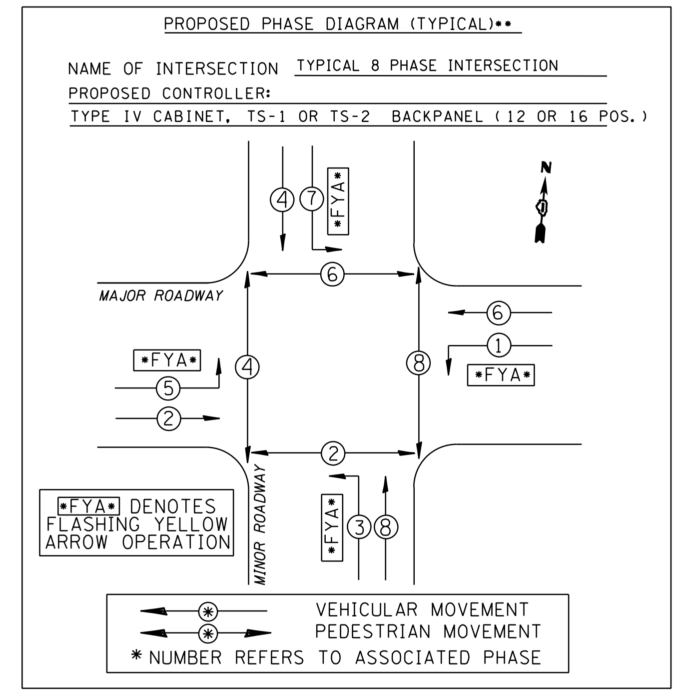
1. THE CONTRACTOR SHALL INFORM THE COUNTY PRIOR TO THE START OF ANY WORK ON THE CONTRACT. A MINIMUM OF FIVE (5) WORKING DAYS ADVANCED NOTICE IS REQUIRED.
2. THE EXACT LOCATIONS OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE THE INSTALLATION OF ANY COMPONENTS OF THE TRAFFIC SIGNAL SYSTEM. FOR THE LOCATIONS OF THE UTILITIES, CALL JULIE TOLL FREE 1-800-892-0123.8. IT IS CONTRACTOR'S RESPONSIBILITY TO LOCATE EXISTING TRAFFIC SIGNAL CABLES AND CONDUITS AND ROADWAY LIGHTING SYSTEM CABLES REGARDLESS OF MAINTENANCE RESPONSIBILITY OF SYSTEM NEEDING TO BE LOCATED.
3. ALL WORK ASSOCIATED WITH INSTALLING NEW CONDUIT INTO EXISTING HANDHOLES, SUCH AS GROUTING, CORING, PATCHING, ETC. SHALL BE INCLUDED IN THE PRICE OF THE CONDUIT BEING INSTALLED.

FLASHING YELLOW ARROW SIGN

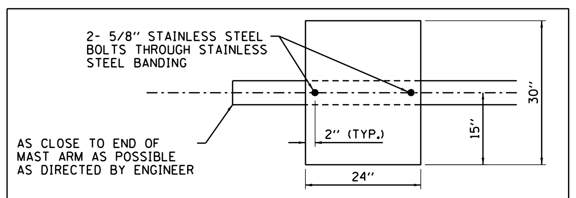
COLOR: BACKGROUND - WHITE
MESSAGE: - BLACK
LINE 1 IS SERIES - C
LINE 2, 4, AND 5 ARE SERIES - D
LINE 3 IS SERIES - B
ALL DIMENSIONS SHOWN ARE IN INCHES
SHEETING: TYPE ZZ



EXISTING PHASE DIAGRAM (TYPICAL) ••
NAME OF INTERSECTION TYPICAL 8 PHASE INTERSECTION
EXISTING CONTROLLER:
TYPE IV CABINET, TS-1 OR TS-2 BACKPANEL (12 OR 16 POS.)
N
MAJOR ROADWAY
MINOR ROADWAY
VEHICULAR MOVEMENT
PEDESTRIAN MOVEMENT
* NUMBER REFERS TO ASSOCIATED PHASE



PROPOSED PHASE DIAGRAM (TYPICAL)••
NAME OF INTERSECTION TYPICAL 8 PHASE INTERSECTION
PROPOSED CONTROLLER:
TYPE IV CABINET, TS-1 OR TS-2 BACKPANEL (12 OR 16 POS.)
N
MAJOR ROADWAY
MINOR ROADWAY
•FYA•
•FYA• DENOTES FLASHING YELLOW ARROW OPERATION
VEHICULAR MOVEMENT
PEDESTRIAN MOVEMENT
* NUMBER REFERS TO ASSOCIATED PHASE



DAMPENING PLATE DETAIL

(TOP VIEW) (INCLUDED IN THE COST OF MAST ARM)

(TYPICAL) •• : SEE INTERSECTION SPECIFIC TRAFFIC SIGNAL AND CABLE PLANS FOR LOCATION SPECIFIC DETAILS AS THERE ARE VARIATIONS FROM THE TYPICAL SHOWN. PHASE DESIGNATIONS SHALL FOLLOW STANDARD 857001 (EXAMPLE PHASE 2 MAY BE EITHER NORTHBOUND THROUGH OR EASTBOUND THROUGH BASED UPON WHICH ROADWAY IS DESIGNATED AS "MAJOR ROADWAY").

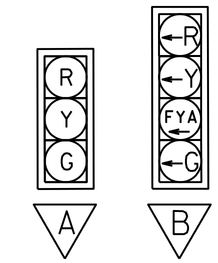
REMOVAL NOTES:

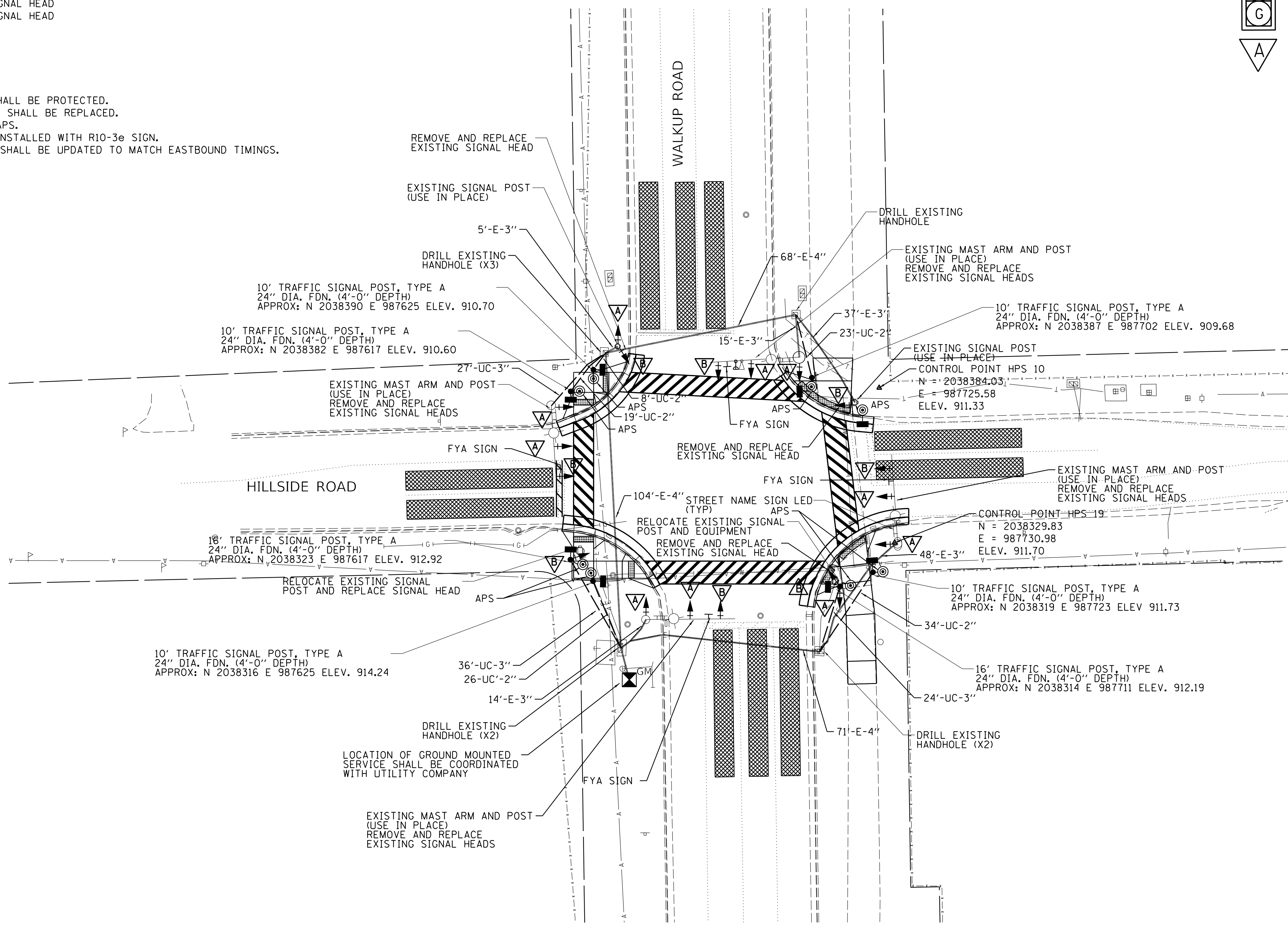
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

6 EACH 5-SECTION SIGNAL HEAD
8 EACH 3-SECTION SIGNAL HEAD

GENERAL NOTES:

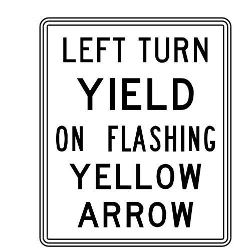
ALL FENCING WITHIN ROW SHALL BE PROTECTED.
ALL EXISTING SIGNAL HEADS SHALL BE REPLACED.
ALL PUSH BUTTONS TO BE APS.
ALL PUSH BUTTONS TO BE INSTALLED WITH R10-3e SIGN.
WESTBOUND SIGNAL PHASES SHALL BE UPDATED TO MATCH EASTBOUND TIMINGS.





R10–3b

4 REQUIRED - LEFT ARROW
4 REQUIRED - RIGHT ARROW



FYA SIGN
4 REQUIRED

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	DRAWN - MOC/TMA	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - KNB	REVISED -
PLOT DATE = 2/17/2023	DATE - -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HILLSIDE ROAD / WALKUP ROAD
SIGNAL PLAN

SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	22
	19L0111	CONTRACT NO. 61J51		
		ILLINOIS FED. AID PROJECT		

HANSON

DESIGNED / DRAWN / REVIEWED

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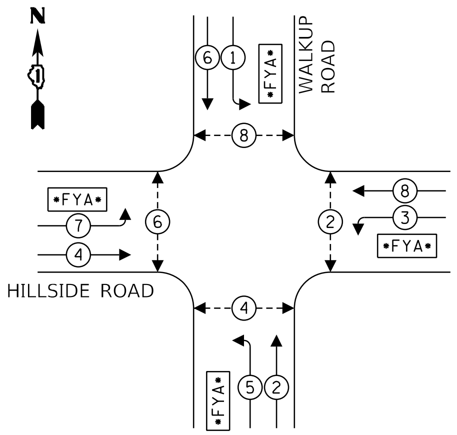
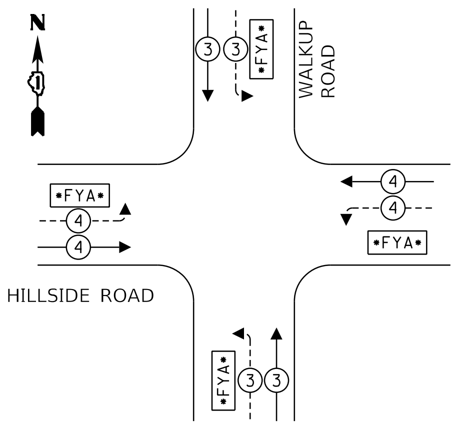
PROPOSED PHASE DIAGRAM



PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



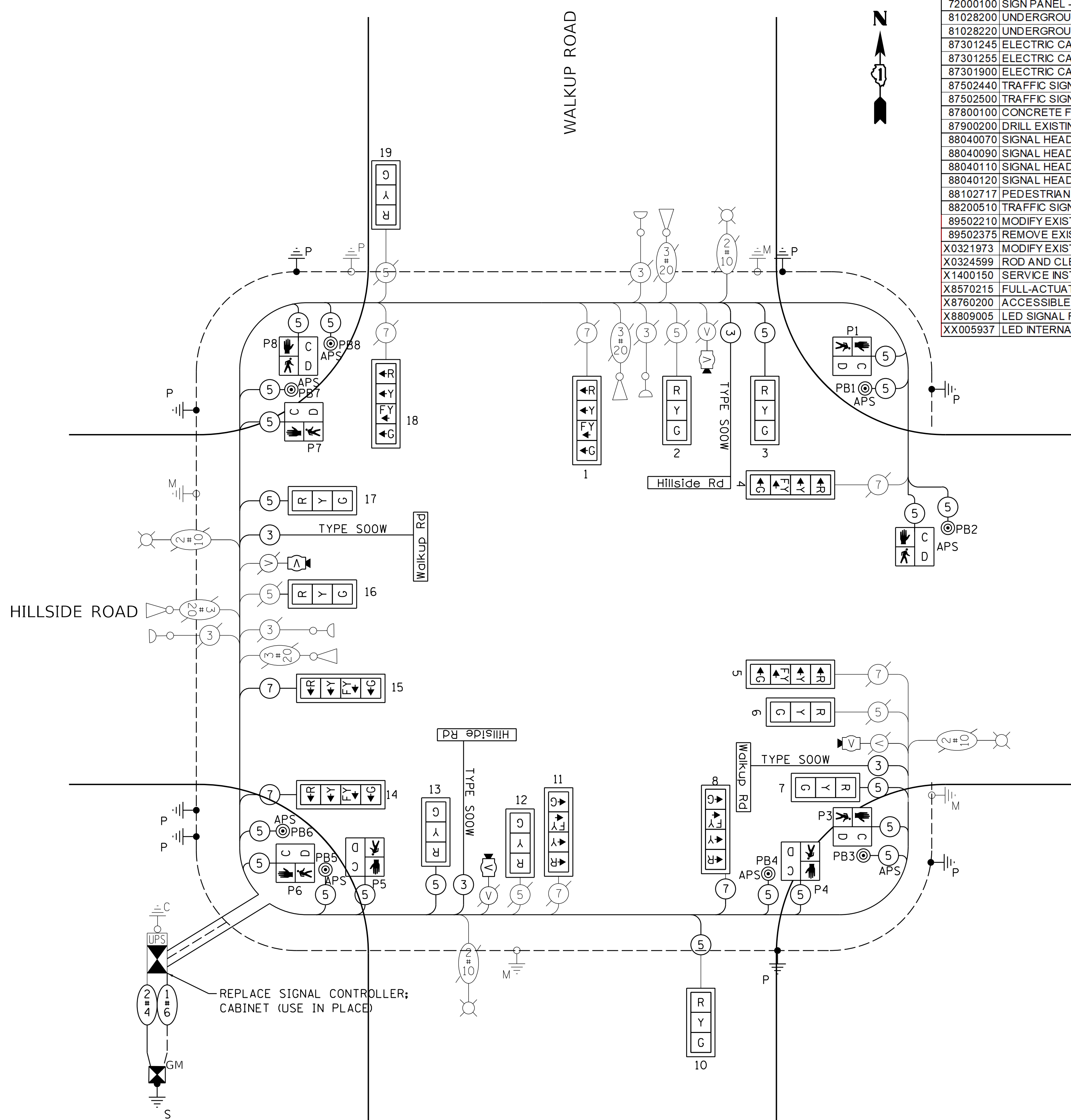
TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	19	11	50	104.5
(YELLOW)	19	20	5	19.0
(GREEN)	19	12	45	102.6
FYA	8	10	45	36.0
PED. SIGNAL	8	20	100	160.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO DETECTION	1	150	100	150.0
LUMINAIRE	4	190	50	380.0
PTZ/SURVEILLANCE	1	60	100	60.0
			TOTAL =	1137.1

ENERGY COST - BILLED TO: McHENRY COUNTY, 2200 N. SEMINARY AVE., WOODSTOCK, IL 60098

ENERGY SUPPLY - CONTACT: LISA ARGAST
PHONE: (630) 576-7094
COMPANY: COMED

PAY ITEM	DESCRIPTION	UNIT	Quantity
72000100	SIGN PANEL - TYPE 1	SQ FT	38
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	110
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	87
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	3338
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	421
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	243
87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	5
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	28
87900200	DRILL EXISTING HANDHOLE	EACH	8
88040070	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	6
88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4
88040110	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	4
88040120	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	4
88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
88200510	TRAFFIC SIGNAL BACKPLATE, RETROREFLECTIVE	EACH	18
89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	1
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
X0321973	MODIFY EXISTING SERVICE INSTALLATION	EACH	1
X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	243
X1400150	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
X8570215	FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	1
X8760200	ACCESSIBLE PEDESTRIAN SIGNALS	EACH	8
X8809005	LED SIGNAL FACE, LENS COVER	EACH	18
XX005937	LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4



CABLE PLAN
(NOT TO SCALE)

HANSON

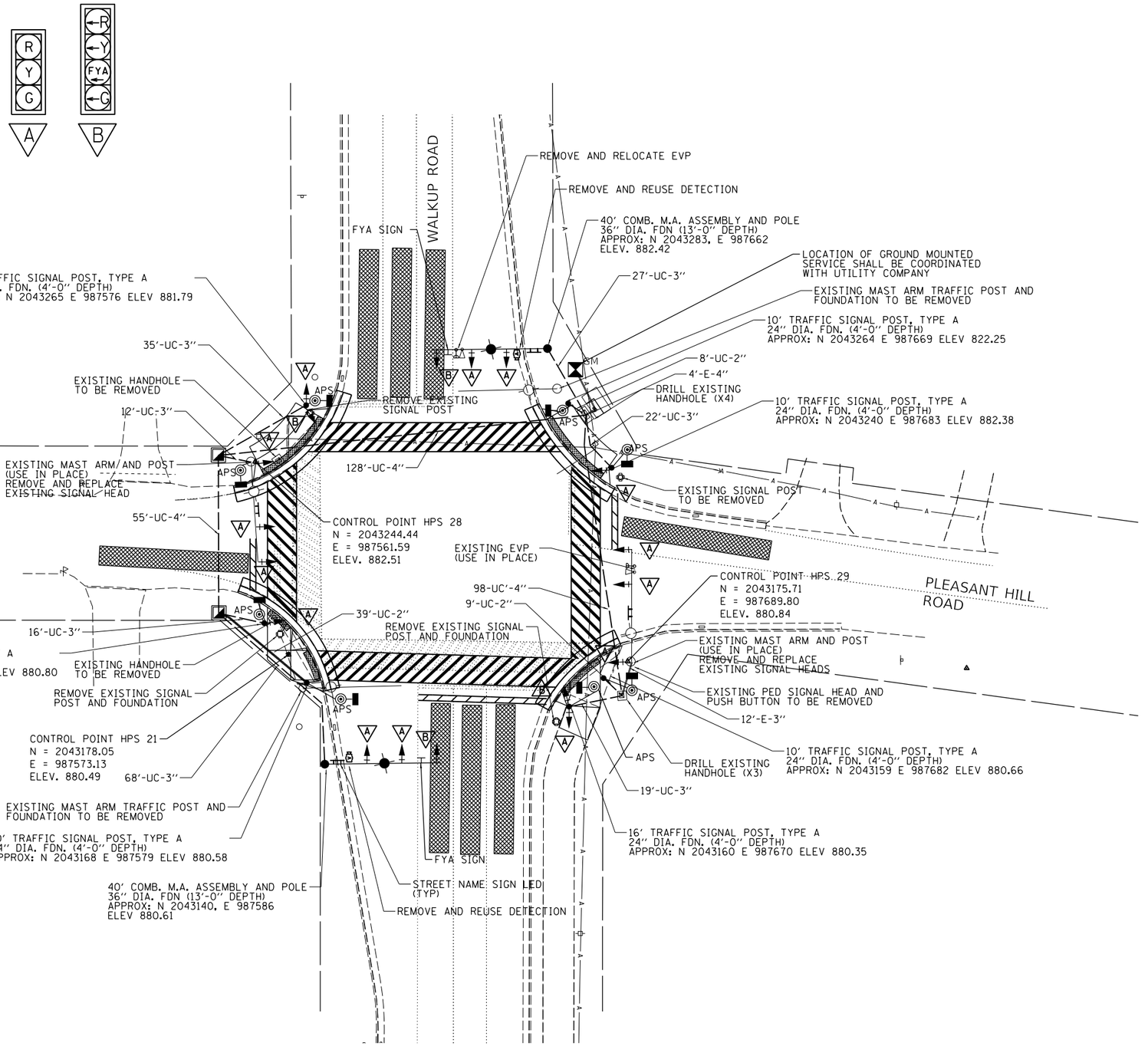
REMOVAL NOTES:

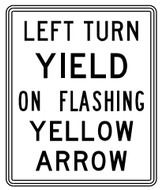
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

2	EACH	STEEL MAST ARM ASSEMBLY AND POLE
2	EACH	3-SECTION SIGNAL HEAD
4	EACH	5-SECTION SIGNAL HEAD

GENERAL NOTES:

ALL EXISTING SIGNAL HEADS SHALL BE REMOVED AND REPLACED.
ALL PUSH BUTTONS TO BE APS.
ALL PUSH BUTTONS TO BE INSTALLED WITH R10-3e SIGN.
EVP AND VIDEO DETECTION EQUIPMENT TO BE RELOCATED TO NEW MAST ARMS.





FYA SIGN

2 REQUIRED

4 REQUIRED - LEFT ARROW
4 REQUIRED - RIGHT ARROW

SCALE IN FEET 0 20 40 60

HPSI

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PLOT DATE = 2/17/2023	DATE - -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLEASANT HILL ROAD / WALKUP ROAD
SIGNAL PLAN

SCALE: 1"=20' | SHEET OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	24
	19L0111	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			

DESIGNED
DRAWN
REVIEWED

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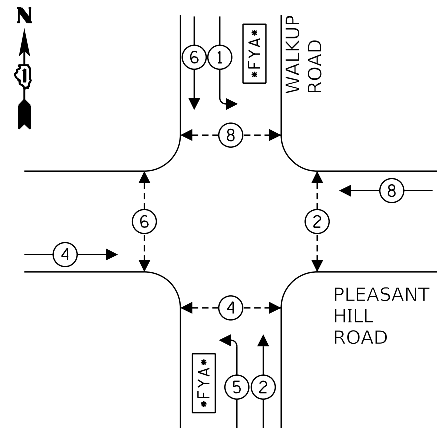
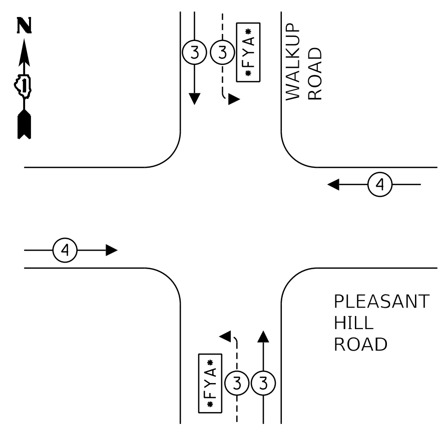
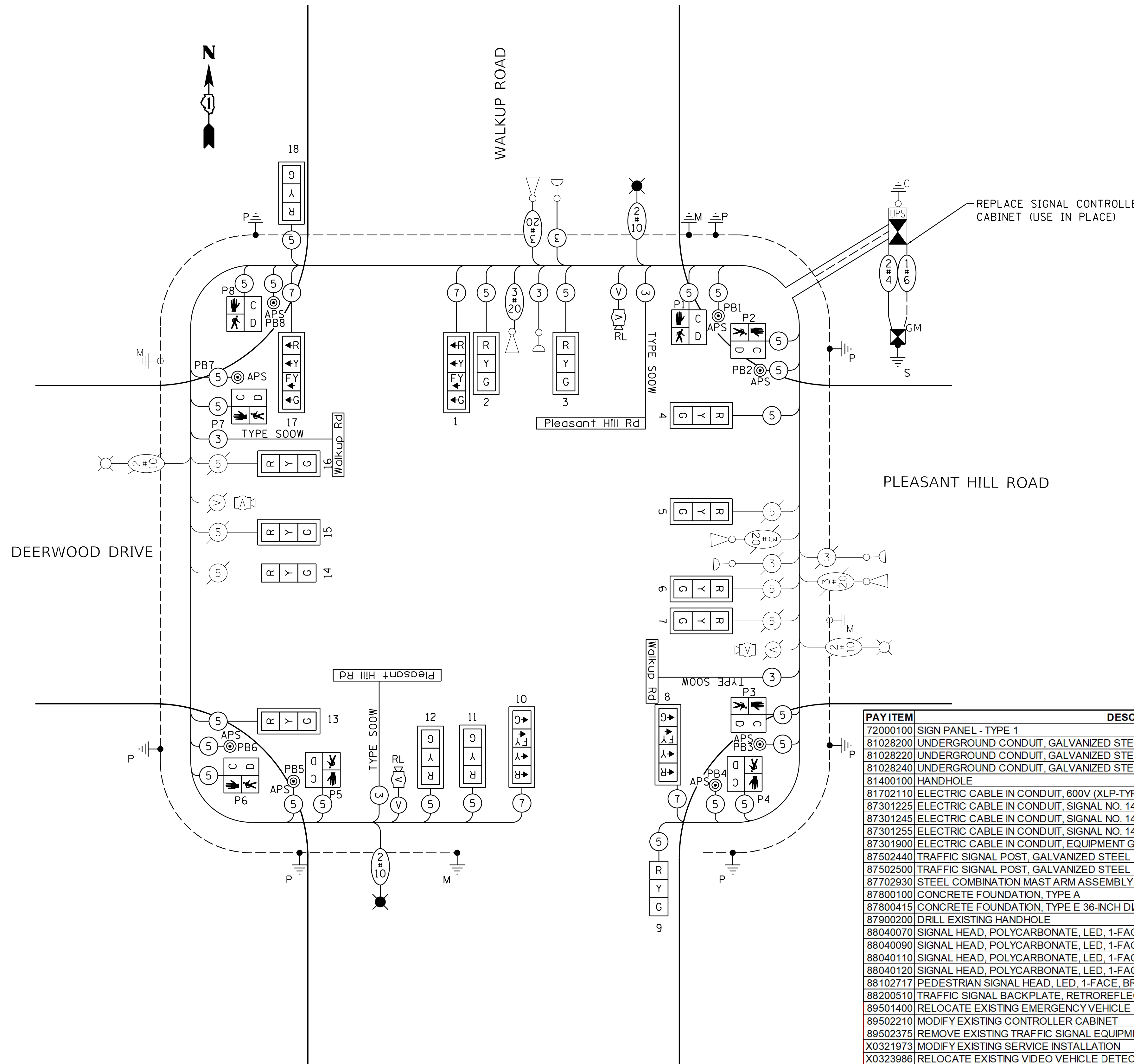
PROPOSED PHASE DIAGRAM



PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE





CABLE PLAN

(NOT TO SCALE)

TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	18	11	50	99.0
(YELLOW)	18	20	5	18.0
(GREEN)	18	12	45	97.2
FYA	4	10	45	18.0
PED. SIGNAL	8	20	100	160.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO DETECTION	1	150	100	150.0
LUMINAIRE	4	190	50	380.0
			TOTAL =	1047.2

ENERGY COST - BILLED TO: McHENRY COUNTY
2200 N. SEMINARY AVE.
WOODSTOCK, IL 60098

ENERGY SUPPLY - CONTACT: LISA ARGAST
PHONE: (630) 576-7094
COMPANY: COMED

PAY ITEM	DESCRIPTION	UNIT	Quantity
72000100	SIGN PANEL - TYPE 1	SQ FT	23
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	56
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	201
81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	281
81400100	HANDHOLE	EACH	2
81702110	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	954
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	220
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	3783
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	749
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	654
87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	4
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	3
87702930	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 40 FT.	EACH	2
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	28
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	26
87900200	DRILL EXISTING HANDHOLE	EACH	8
88040070	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	6
88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	8
88040110	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2
88040120	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	2
88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
88200510	TRAFFIC SIGNAL BACKPLATE, RETROREFLECTIVE	EACH	18
89501400	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	2
89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	1
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
X0321973	MODIFY EXISTING SERVICE INSTALLATION	EACH	1
X0323986	RELOCATE EXISTING VIDEO VEHICLE DETECTOR	EACH	2
X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	220
X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	240
X1400150	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
X1400238	LUMINAIRE, LED, SPECIAL	EACH	2
X8570215	FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	1
X8760200	ACCESSIBLE PEDESTRIAN SIGNALS	EACH	8
X8809005	LED SIGNAL FACE, LENS COVER	EACH	18
XX005937	LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4

HPSI

DESIGNED | DRAWN | REVIEWED

USER NAME = Pearc00397	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 2/17/2023	DATE - -	REVISED -	

PLEASANT HILL ROAD / WALKUP ROAD WIRING DIAGRAM

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	25
	19L0111	CONTRACT NO. 61J51		
	ILLINOIS	FED. AID PROJECT		

PENTABLE NAME = ...\pen\LargeFormat_Plotter.tbl   PLOT DRIVER NAME = ...\HANSON.pdf_300dpi.pltcfg

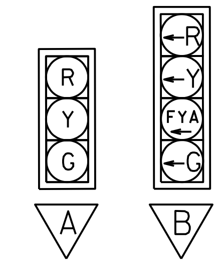
GENERAL NOTES:

ALL EXISTING SIGNAL HEADS TO BE REMOVED AND REPLACED.
EVP AND VIDEO DETECTION EQUIPMENT TO BE RELOCATED TO NEW MAST ARMS.

REMOVAL NOTES:

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

2	EACH	STEEL MAST ARM ASSEMBLY AND POLE
12	EACH	3-SECTION SIGNAL HEAD
4	EACH	5-SECTION SIGNAL HEAD



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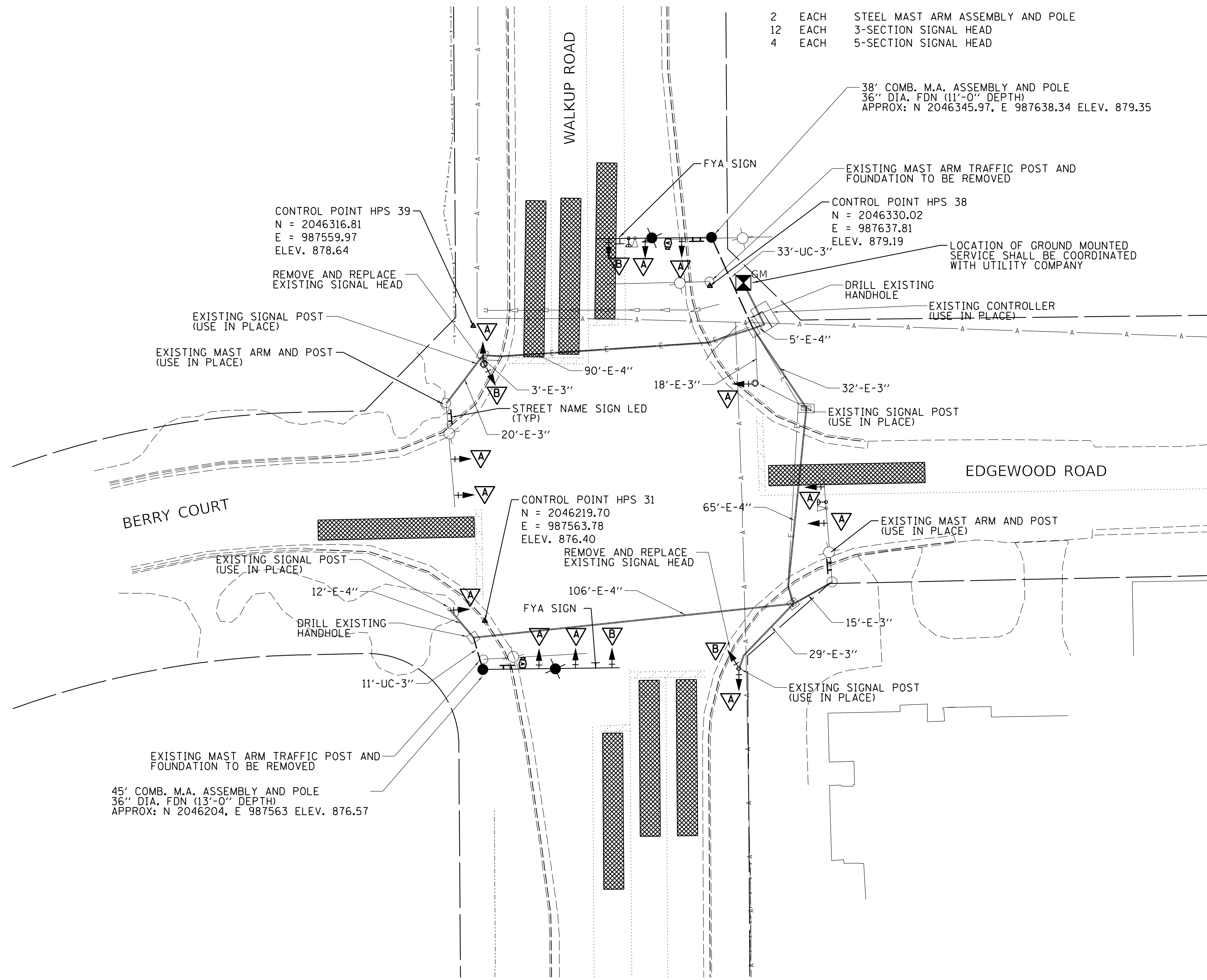

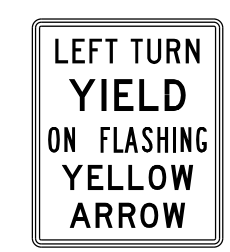

FYA SIGN

2 REQUIRED

0 20 40 60

SCALE IN FEET

HPSI

USER NAME = Pearc00397	DESIGNED - TMA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN - MOC/TMA	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - KNB	REVISED -	
PLOT DATE = 2/17/2023	DATE -	REVISED -	

EDGEWOOD ROAD / WALKUP ROAD
SIGNAL PLAN

SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	26
	19L0111	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			

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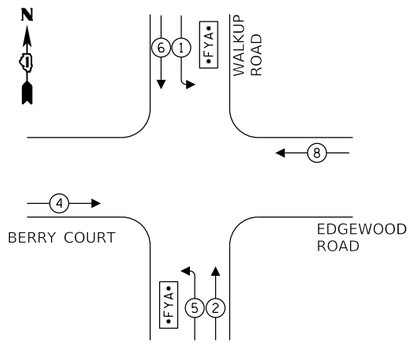
MODEL: Default

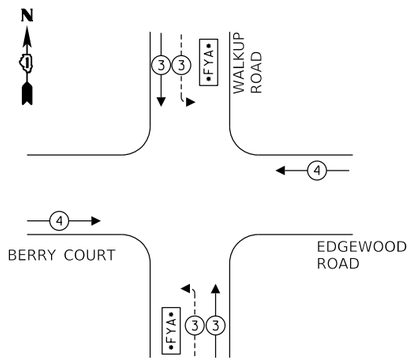
DESIGNED
DRAWN
REVIEWED

HANSON

PROPOSED PHASE DIAGRAM



PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

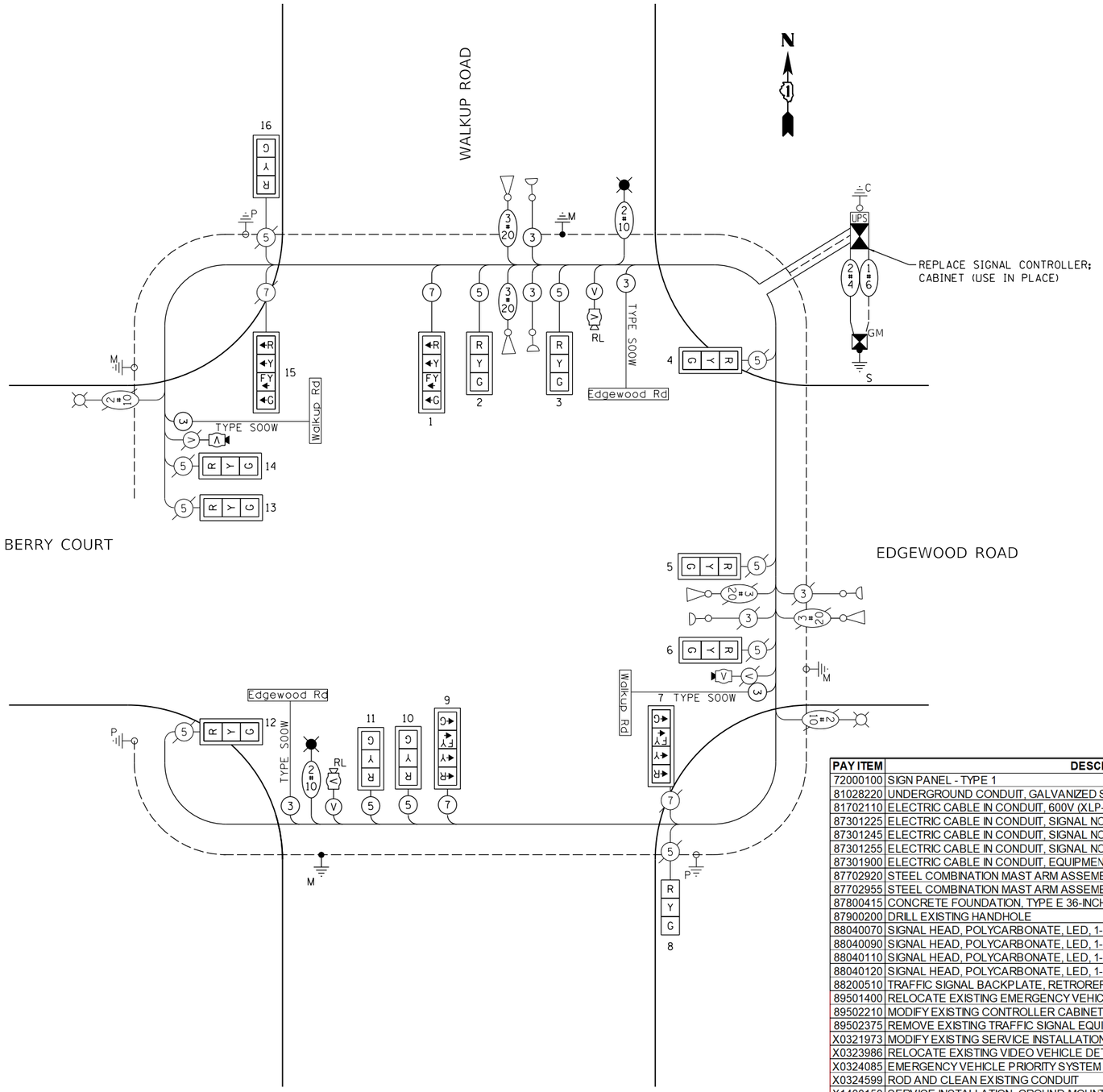


TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	16	11	50	88.0
(YELLOW)	16	20	5	16.0
(GREEN)	16	12	45	86.4
FYA	4	10	45	18.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO DETECTION	1	150	100	150.0
LUMINAIRE	4	190	50	380.0
			TOTAL =	863.4

ENERGY COST - BILLED TO: McHENRY COUNTY
2200 N. SEMINARY AVE.
WOODSTOCK, IL 60098

ENERGY SUPPLY - CONTACT: LISA ARGAST
PHONE: (630) 576-7094
COMPANY: COMED



CABLE PLAN
(NOT TO SCALE)

PAY ITEM	DESCRIPTION	UNIT	Quantity
72000100	SIGN PANEL - TYPE 1	SQ FT	15
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	44
81702110	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	922
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	196
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	806
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	439
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	70
87702920	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT.	EACH	1
87702955	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 45 FT.	EACH	1
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	26
87900200	DRILL EXISTING HANDHOLE	EACH	2
88040070	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4
88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	8
88040110	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2
88040120	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	2
88200510	TRAFFIC SIGNAL BACKPLATE, RETROREFLECTIVE	EACH	16
89501400	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	2
89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	1
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
X0321973	MODIFY EXISTING SERVICE INSTALLATION	EACH	1
X0323986	RELOCATE EXISTING VIDEO VEHICLE DETECTOR	EACH	2
X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	196
X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	120
X1400150	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
X1400238	LUMINAIRE, LED, SPECIAL	EACH	2
X8570215	FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	1
X8809005	LED SIGNAL FACE, LENS COVER	EACH	16
XX005937	LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4

HPSI

USER NAME = PearceO0597	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 2/17/2023	DATE - -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EDGEWOOD ROAD / WALKUP ROAD
WIRING DIAGRAM

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	27
	19L0111	CONTRACT NO.	61J51	
	ILLINOIS FED. AID PROJECT			

DESIGNED
DRAWN
REVIEWED

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PLOT DRIVER NAME = ...\HANSON.pdf_300dpi.pltcfg

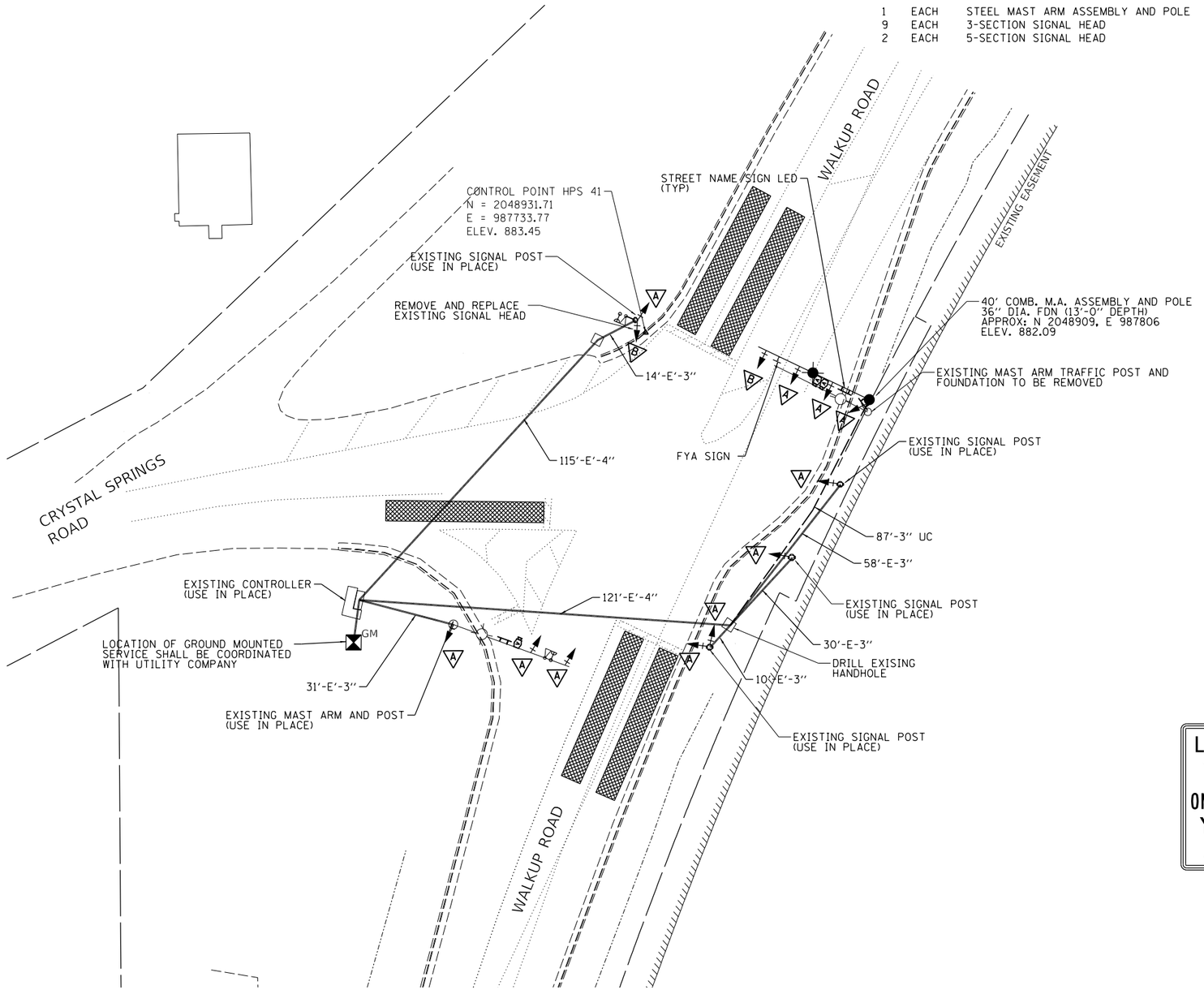
GENERAL NOTES:

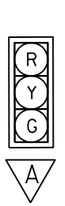
ALL EXISTING SIGNAL HEADS SHALL BE REPLACED.
EVP AND VIDEO DETECTION EQUIPMENT TO BE RELOCATED TO NEW MAST ARM.

REMOVAL NOTES:

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1	EACH	STEEL MAST ARM ASSEMBLY AND POLE
9	EACH	3-SECTION SIGNAL HEAD
2	EACH	5-SECTION SIGNAL HEAD





FYA SIGN

1 REQUIRED

0 20 40 60

SCALE IN FEET

HPSI

USER NAME = Pearc00397	DESIGNED - TMA	REVISED -	
	DRAWN - MQC/TMA	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - KNB	REVISED -	
PLOT DATE = 2/17/2023	DATE - -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CRYSTAL SPRINGS ROAD / CRYSTAL LAKE ROAD
SIGNAL PLAN

SCALE: 1"=20' | SHEET OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	28
	19L0111	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			

DESIGNED
DRAWN
REVIEWED

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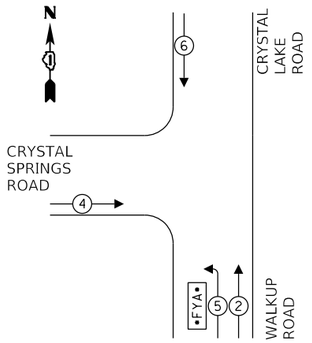
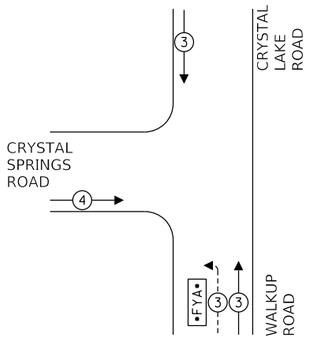
PLOT DRIVER NAME = ...\HANSON.pdf_300dpi.pltcfg

PROPOSED PHASE DIAGRAM



PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

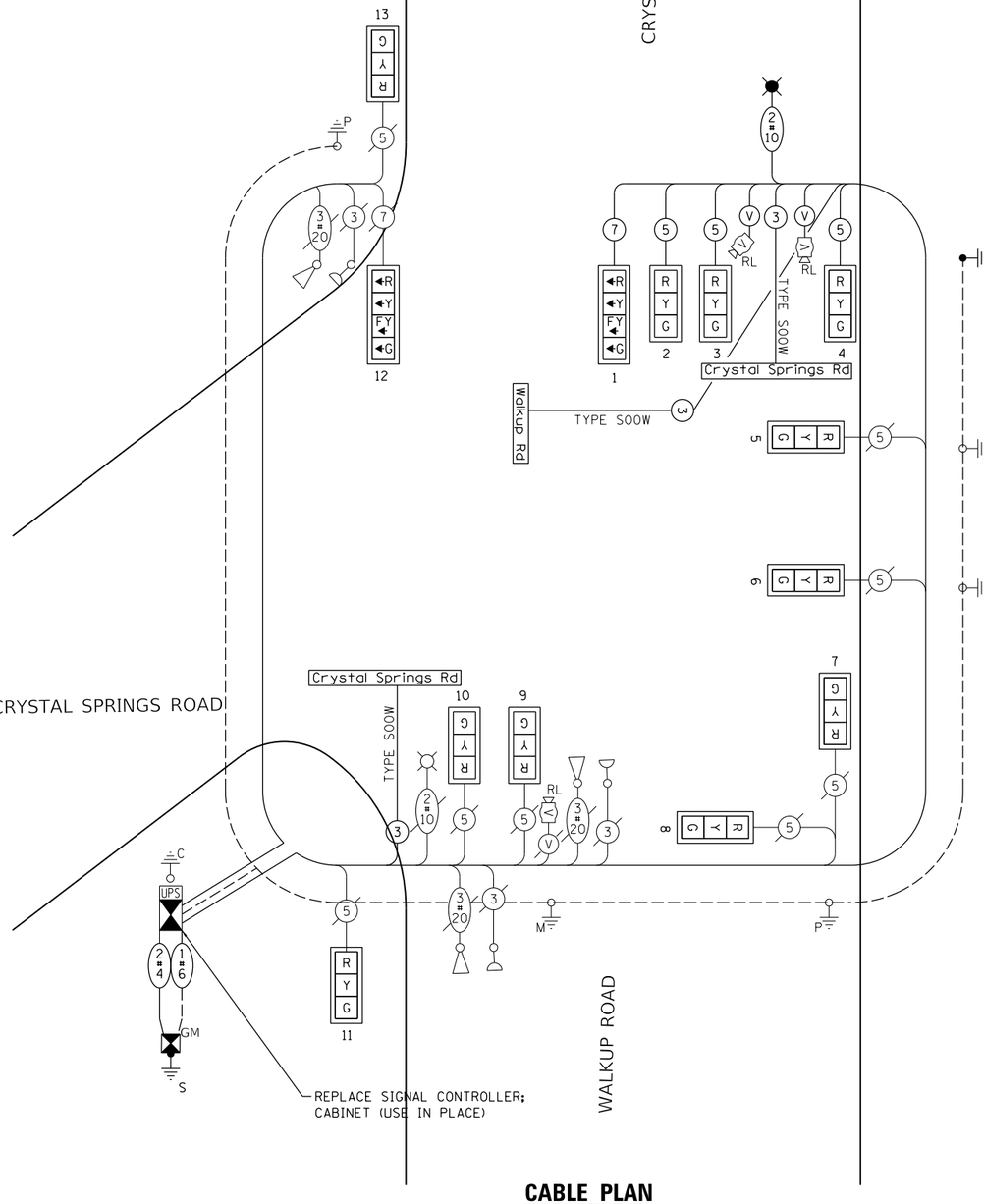


TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	13	11	50	71.5
(YELLOW)	13	20	5	13.0
(GREEN)	13	12	45	70.2
FYA	2	10	45	9.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO DETECTION	1	150	100	150.0
LUMINAIRE	2	190	50	190.0
			TOTAL =	628.7

ENERGY COST - BILLED TO: McHENRY COUNTY
2200 N. SEMINARY AVE.
WOODSTOCK, IL 60098

ENERGY SUPPLY - CONTACT: LISA ARGAST
PHONE: (630) 576-7094
COMPANY: COMED



CABLE PLAN
(NOT TO SCALE)

PAY ITEM	DESCRIPTION	UNIT	Quantity
72000100	SIGN PANEL - TYPE 1	SQ FT	8
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	87
81702110	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	617
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	823
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	304
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	97
87702930	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 40 FT.	EACH	1
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	13
87900200	DRILL EXISTING HANDHOLE	EACH	1
88040070	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	7
88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4
88040110	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	1
88040120	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	1
88200510	TRAFFIC SIGNAL BACKPLATE, RETROREFLECTIVE	EACH	13
89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	1
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
X0321973	MODIFY EXISTING SERVICE INSTALLATION	EACH	1
X0323986	RELOCATE EXISTING VIDEO VEHICLE DETECTOR	EACH	2
X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	121
X1400150	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
X1400238	LUMINAIRE, LED, SPECIAL	EACH	1
X8570215	FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	1
X8809005	LED SIGNAL FACE, LENS COVER	EACH	13
XX005937	LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	3

DESIGNED
DRAWN
REVIEWED

MODEL: Default
FILE NAME: pw:\\hansonims-pw.bentley.com:hanson-pw-011Documents\19Jobs\19L0111\CAD - Use MicroStation V8i or PowerGeopak SS10\RoadSheets\

USER NAME = Pearc00397	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
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PLOT DATE = 2/17/2023	DATE - -	REVISED -	

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PLOT DRIVER NAME = ...\HANSON_pdf_300dpi.pltcfg

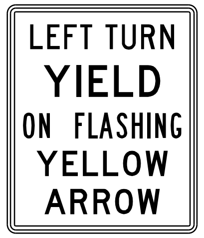
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CRYSTAL SPRINGS ROAD / CRYSTAL LAKE ROAD
WIRING DIAGRAM

SCALE: | SHEET OF SHEETS | STA. | TO STA.

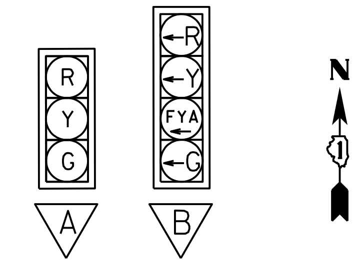
HPS1

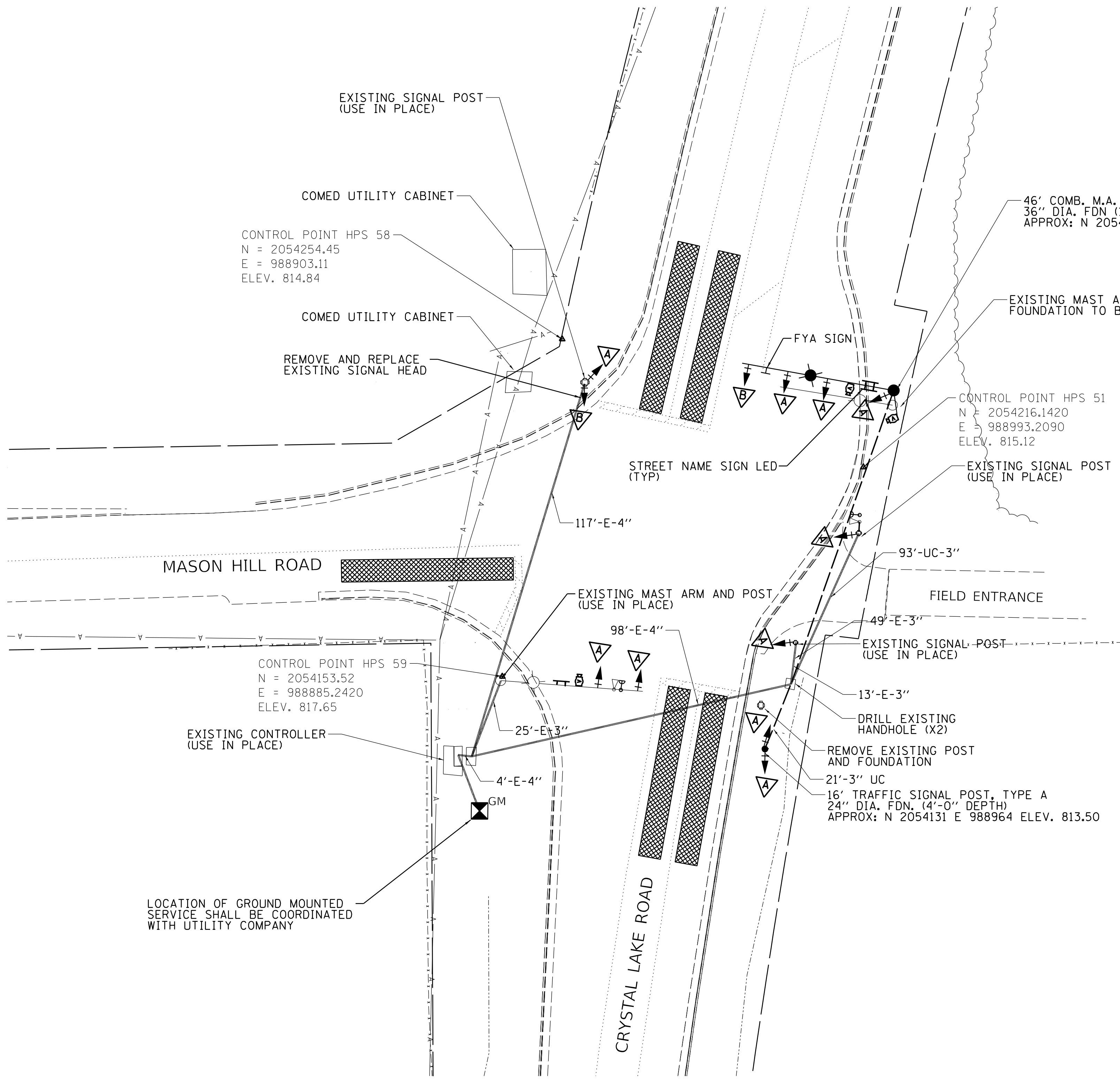
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	29
	19L0111	CONTRACT NO.	61J51	
	ILLINOIS FED. AID PROJECT			



FYA SIGN

1 REQUIRED





REMOVAL NOTES:

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1	EACH	STEEL MAST ARM ASSEMBLY AND POLE
2	EACH	3-SECTION SIGNAL HEAD
2	EACH	5-SECTION SIGNAL HEAD

GENERAL NOTES:

ALL EXISTING SIGNAL HEADS SHALL BE REPLACED.
EVP AND VIDEO DETECTION EQUIPMENT TO BE RELOCATED TO NEW MAST ARM.

0 20 40 60
SCALE IN FEET

HPSI

HANSON

MODEL: Default
FILE NAME: pw:\\hansoninc-pw.bentley.com:hanson-pw-01\Documents\19Jobs\19L0111\CAD - Use MicroStation V8i or PowerGeopak SS10\Road\Sheets\sh...

DESIGNED	DRAWN	REVIEWED

USER NAME = Pearc00397	DESIGNED - TMA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN - MQC/TMA	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - KNB	REVISED -	
PLOT DATE = 2/17/2023	DATE - -	REVISED -	

MASON HILL ROAD / CRYSTAL LAKE ROAD
SIGNAL PLAN

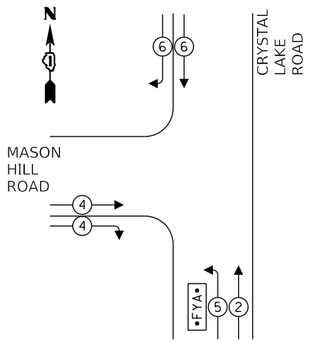
SCALE: 1"=20' | SHEET OF SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	30
	19L0111	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			

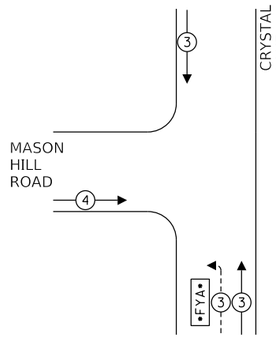
PENTABLE NAME = ...\pen\LargeFormat_Plotter.tbl

PLOT DRIVER NAME = ...\HANSON_pdf_300dpi.pltcfg

PROPOSED PHASE DIAGRAM



PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

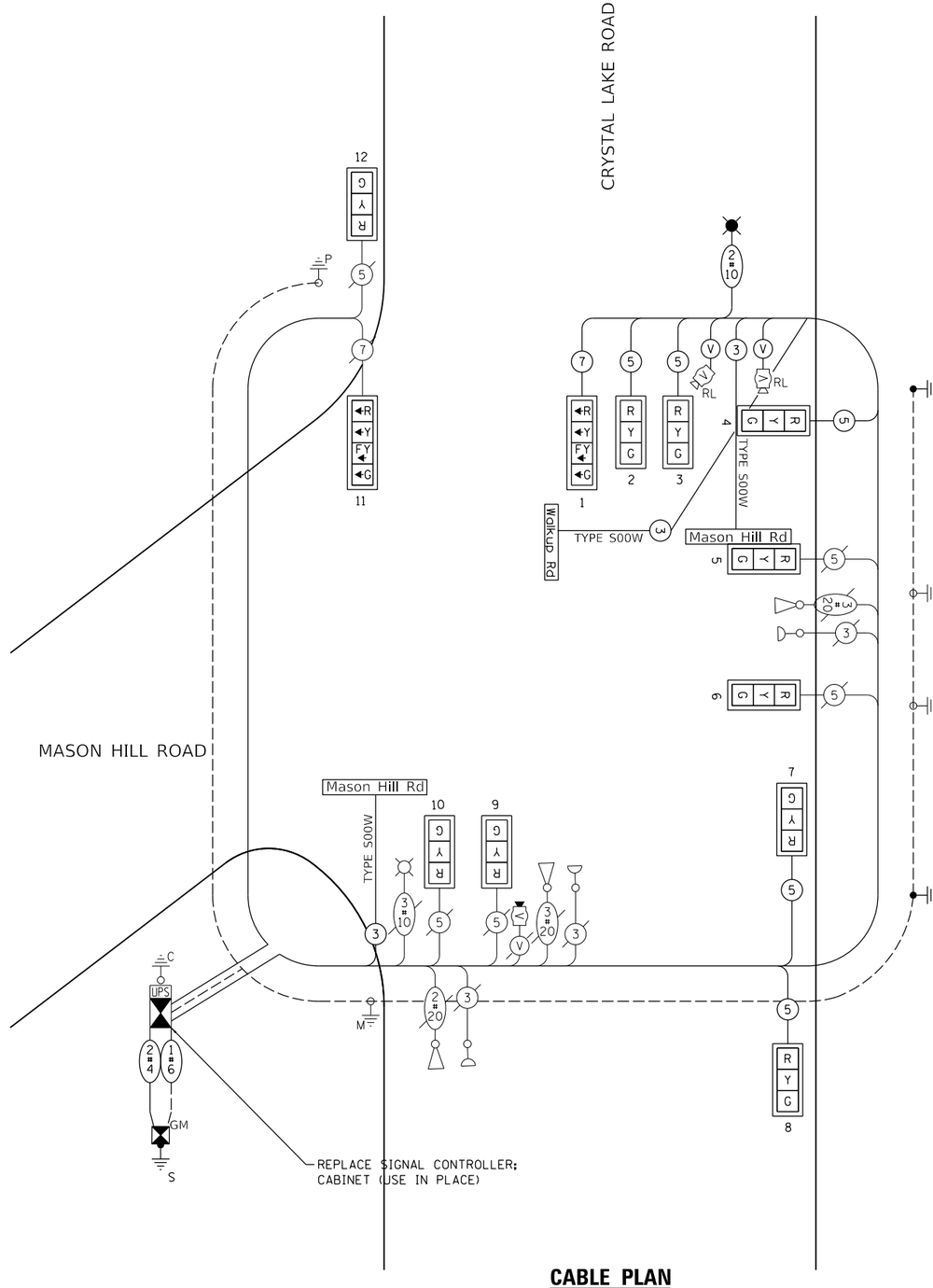


TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	11	50	66.0
(YELLOW)	12	20	5	12.0
(GREEN)	12	12	45	64.8
FYA	2	10	45	9.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO DETECTION	1	150	100	150.0
LUMINAIRE	2	190	50	190.0
			TOTAL =	616.8

ENERGY COST - BILLED TO: McHENRY COUNTY
2200 N. SEMINARY AVE.
WOODSTOCK, IL 60098

ENERGY SUPPLY - CONTACT: LISA ARGAST
PHONE: (630) 576-7094
COMPANY: COMED



CABLE PLAN
(NOT TO SCALE)

PAY ITEM	DESCRIPTION	UNIT	Quantity
72000100	SIGN PANEL - TYPE 1	SQ FT	8
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	114
81702110	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	581
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	927
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	286
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	103
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1
87702960	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 46 FT.	EACH	1
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	4
87800415	CONCRETE FOUNDATION, TYPE E 36-NCH DIAMETER	FOOT	13
87900200	DRILL EXISTING HANDHOLE	EACH	2
88040070	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	6
88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4
88040110	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	1
88040120	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	1
88200510	TRAFFIC SIGNAL BACKPLATE, RETROREFLECTIVE	EACH	12
89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	1
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
X0321973	MODIFY EXISTING SERVICE INSTALLATION	EACH	1
X0323986	RELOCATE EXISTING VIDEO VEHICLE DETECTOR	EACH	2
X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	102
X1400150	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
X1400238	LUMINAIRE, LED, SPECIAL	EACH	1
X8570215	FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	1
X8809005	LED SIGNAL FACE, LENS COVER	EACH	12
XX005937	LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	3

MODEL: Default
FILE NAME: pw:\\hansonllc-pw.bentley.com:hanson-pw-01\Documents\19Jobs\19L0111\CAD - Use MicroStation V8i or PowerGeopak SS10\RoadSheets\

DESIGNED | DRAWN | REVIEWED

HPS1

USER NAME = Pearc00397	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 2/17/2023	DATE - -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MASON HILL ROAD / CRYSTAL LAKE ROAD
WIRING DIAGRAM

SCALE: | SHEET OF SHEETS | STA. | TO STA.

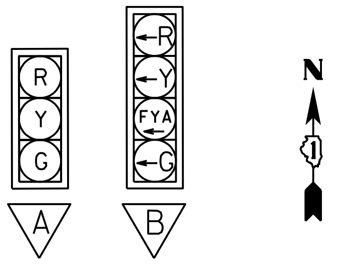
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	31
	19L0111	CONTRACT NO.	61J51	
	ILLINOIS	FED. AID PROJECT		

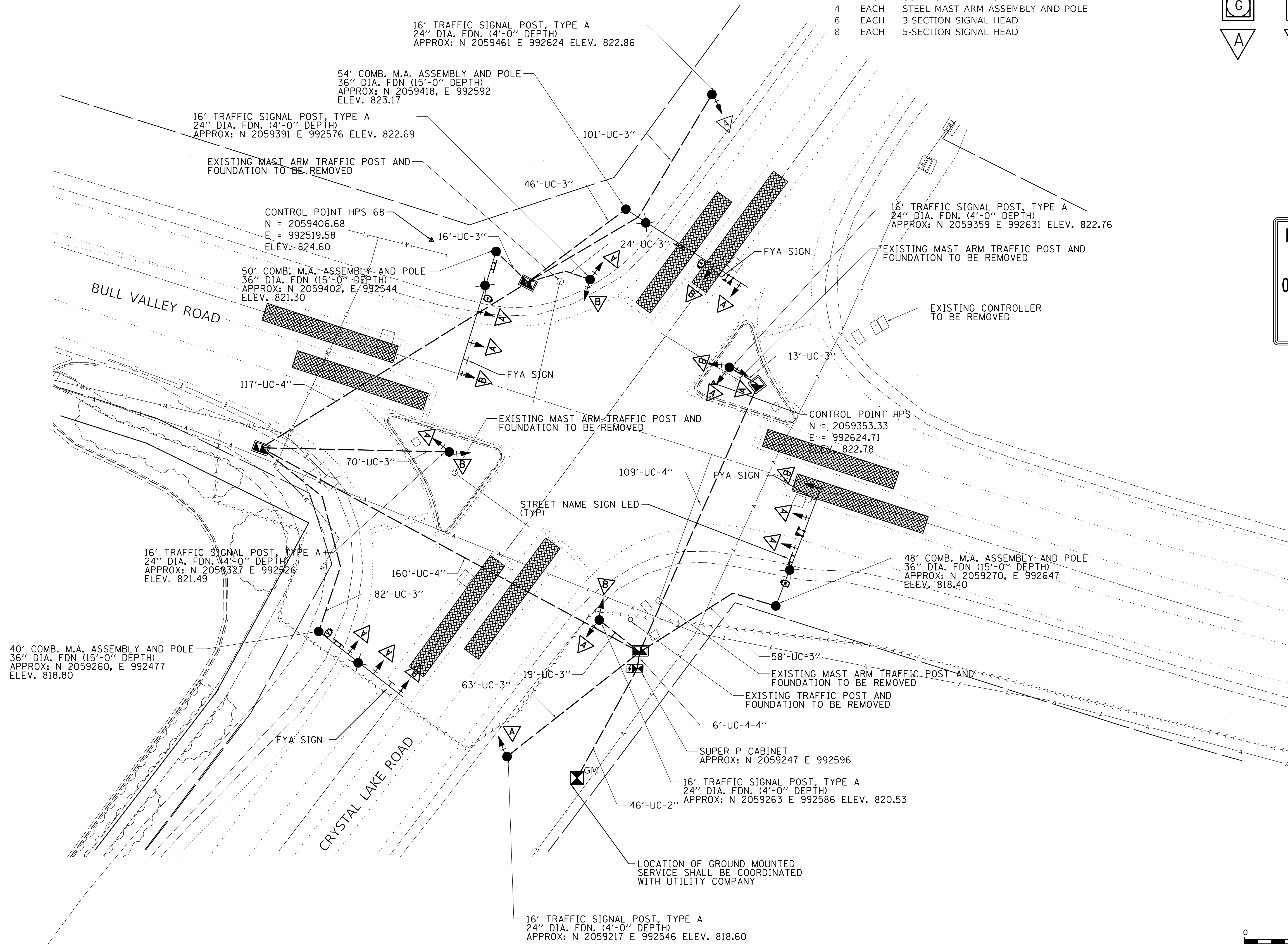
PENTABLE NAME = ...\pen\LargeFormat_Plotter.tbl
PLOT DRIVER NAME = ...\HANSON.pdf_300dpi.pltcfg

REMOVAL NOTES:

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT AT THEIR EXPENSE.
THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1	EACH	CONTROLLER AND CABINET
4	EACH	STEEL MAST ARM ASSEMBLY AND POLE
6	EACH	3-SECTION SIGNAL HEAD
8	EACH	5-SECTION SIGNAL HEAD





LEFT TURN
YIELD
ON FLASHING
YELLOW
ARROW

FYA SIGN
4 REQUIRED

0 20 40 60
SCALE IN FEET

HPSI

HANSON

MODEL: Default
FILE NAME: pw:\\hansoninc-pw.bentley.com:hanson-pw-01\Documents\19Jobs\19L0111\CAD - Use MicroStation V8i or PowerGeopak SS10\Road\Sheets\sh...

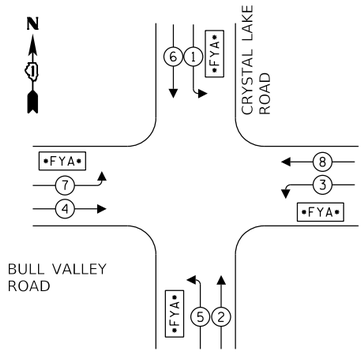
DESIGNED	DRAWN	REVIEWED

USER NAME = Pearc00397	DESIGNED - TMA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BULL VALLEY ROAD / CRYSTAL LAKE ROAD SIGNAL PLAN
	DRAWN - MQC/TMA	REVISED -		
PLOT SCALE = 40.0000 ' / in.	CHECKED - KNB	REVISED -		
PLOT DATE = 2/17/2023	DATE - -	REVISED -		SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

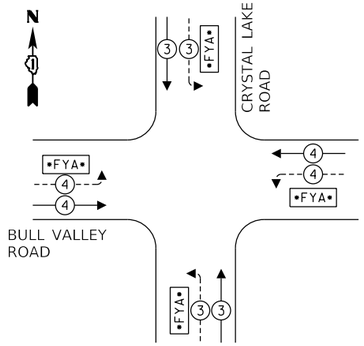
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	32
	19L0111	CONTRACT NO. 61J51		
	ILLINOIS	FED. AID PROJECT		

PENTABLE NAME = ...\pen\LargeFormat_Plotter.tbl
PLOT DRIVER NAME = ...\HANSON_pdf_300dpi.pltcfg

PROPOSED PHASE DIAGRAM



PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

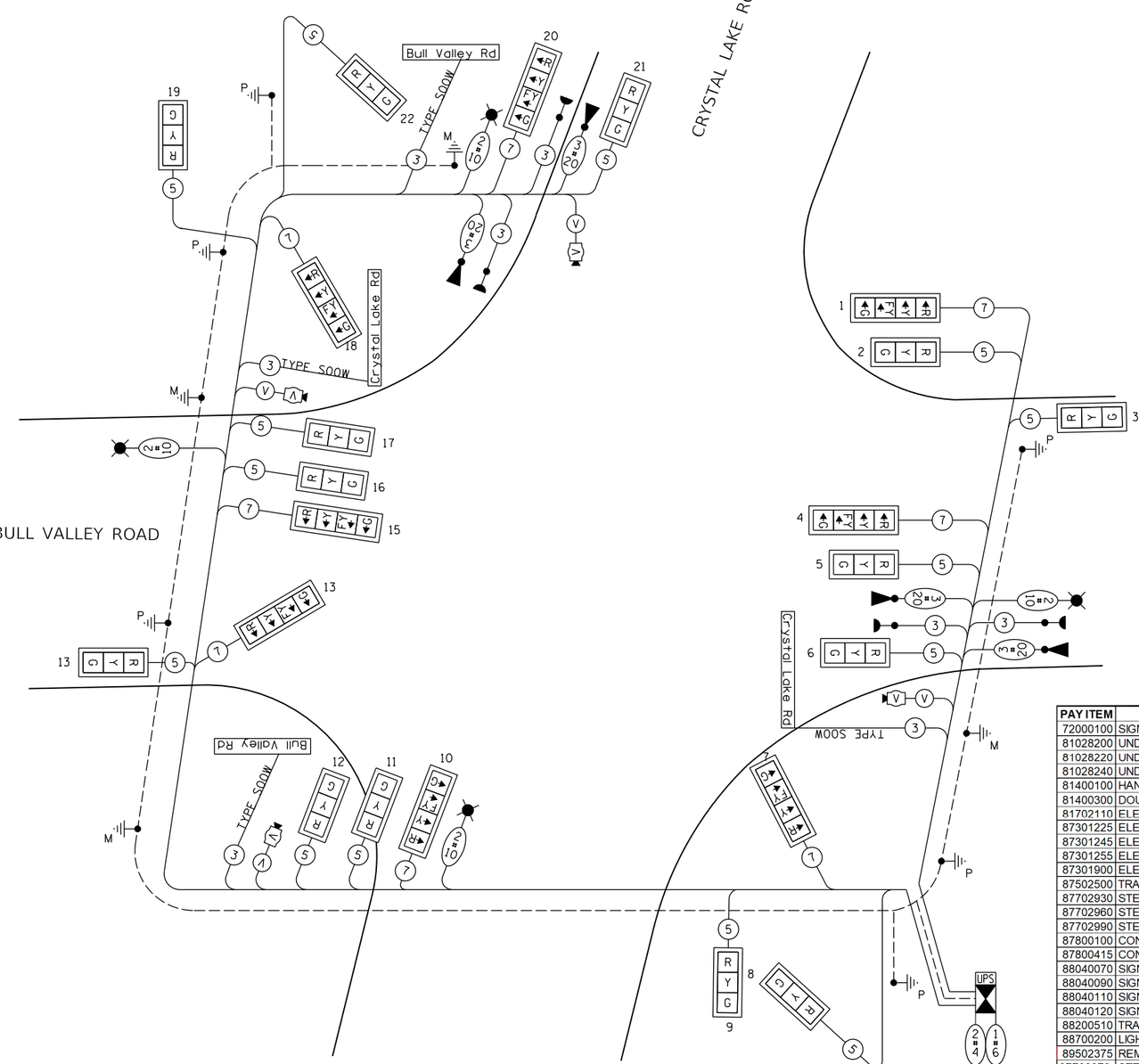


TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	21	11	50	115.5
(YELLOW)	21	20	5	21.0
(GREEN)	21	12	45	113.4
FYA	8	10	45	36.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO DETECTION	1	150	100	150.0
LUMINAIRE	4	190	50	380.0
			TOTAL =	940.9

ENERGY COST - BILLED TO: McHENRY COUNTY
2200 N. SEMINARY AVE.
WOODSTOCK, IL 60098

ENERGY SUPPLY - CONTACT: LISA ARGAST
PHONE: (630) 576-7094
COMPANY: COMED



CABLE PLAN
(NOT TO SCALE)

PAY ITEM	DESCRIPTION	UNIT	Quantity
72000100	SIGN PANEL - TYPE 1	SQ FT	30
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	46
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	492
81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	410
81400100	HANDHOLE	EACH	1
81400300	DOUBLE HANDHOLE	EACH	3
81702110	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	2722
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	547
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	3709
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2218
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1187
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	6
87702930	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 40 FT.	EACH	1
87702960	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 46 FT.	EACH	1
87702990	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 54 FT.	EACH	1
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	24
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	56
88040070	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	7
88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	7
88040110	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	4
88040120	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	4
88200510	TRAFFIC SIGNAL BACKPLATE, RETROREFLECTIVE	EACH	22
88700200	LIGHT DETECTOR	EACH	4
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
87702970	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 48 FT.	EACH	1
87702980	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 50 FT.	EACH	1
X0321973	MODIFY EXISTING SERVICE INSTALLATION	EACH	1
X0322281	WIDE AREA VIDEO DETECTION SYSTEM COMPLETE	EACH	1
X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	547
X1400107	FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET	EACH	1
X1400150	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
X1400238	LUMINAIRE, LED, SPECIAL	EACH	4
X8809005	LED SIGNAL FACE, LENS COVER	EACH	22
X8870300	EMERGENCY VEHICLE PRIORITY SYSTEM	EACH	1
XX005937	LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4

HANSON

DESIGNED
DRAWN
REVIEWED

MODEL: Default
FILE NAME: pw:\\hansonline-pw.bentley.com:ansonline-pw01\Documents\19Jobs\19L0111\CAD - Use MicroStation V8i or PowerGeopak SS10\RoadSheets\sht_RoadSheets.dgn

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	DRAWN -	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 2/17/2023	DATE - -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BULL VALLEY ROAD / CRYSTAL LAKE ROAD
WIRING DIAGRAM

SCALE: SHEET OF SHEETS STA. TO STA.

HPSI

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	33
	19L0111	CONTRACT NO.		61J51
	ILLINOIS FED. AID PROJECT			

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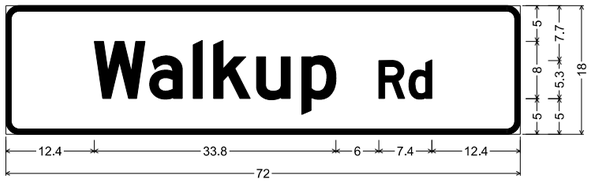
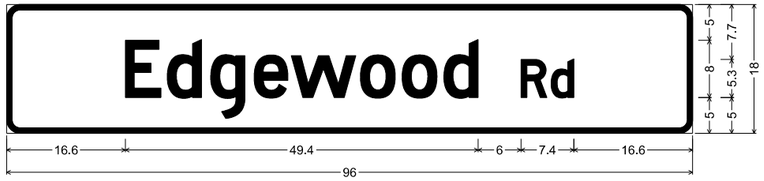


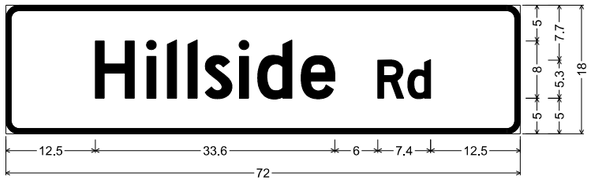
D3-1(3)_VARx18;
1.9" Radius, 0.8" Border, White on, Green;
"Walkup", D 2K; "Rd", D 2K;

DESIGN SERIES	AREA (SQ FT)	SHEETING TYPE	QTY. REQUIRED
D	9	ILLUM. SIGN (ZZ)	7



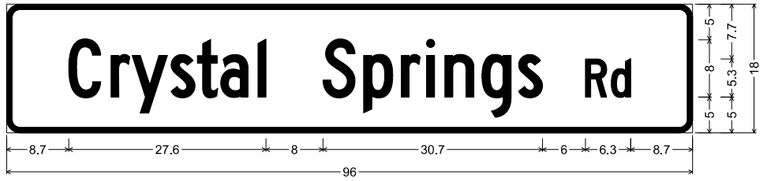
D3-1(3)_VARx18;
1.9" Radius, 0.8" Border, White on, Green;
"Edgewood", D 2K; "Rd", D 2K;

DESIGN SERIES	AREA (SQ FT)	SHEETING TYPE	QTY. REQUIRED
D	12	ILLUM. SIGN (ZZ)	1



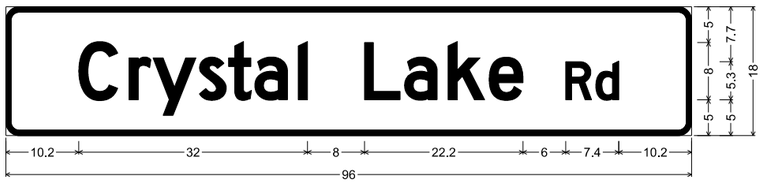
D3-1(3)_VARx18;
1.9" Radius, 0.8" Border, White on, Green;
"Hillside", D 2K; "Rd", D 2K;

DESIGN SERIES	AREA (SQ FT)	SHEETING TYPE	QTY. REQUIRED
D	9	ILLUM. SIGN (ZZ)	2



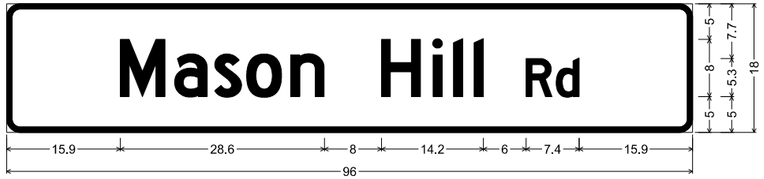
D3-1(3)_VARx18;
1.9" Radius, 0.8" Border, White on, Green;
"Crystal Springs", C 2K; "Rd", C 2K;

DESIGN SERIES	AREA (SQ FT)	SHEETING TYPE	QTY. REQUIRED
D	12	ILLUM. SIGN (ZZ)	2



D3-1(3)_VARx18;
1.9" Radius, 0.8" Border, White on, Green;
"Crystal Lake", D 2K; "Rd", D 2K;

DESIGN SERIES	AREA (SQ FT)	SHEETING TYPE	QTY. REQUIRED
D	12	ILLUM. SIGN (ZZ)	3



D3-1(3)_VARx18;
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"Mason Hill", D 2K; "Rd", D 2K;

DESIGN SERIES	AREA (SQ FT)	SHEETING TYPE	QTY. REQUIRED
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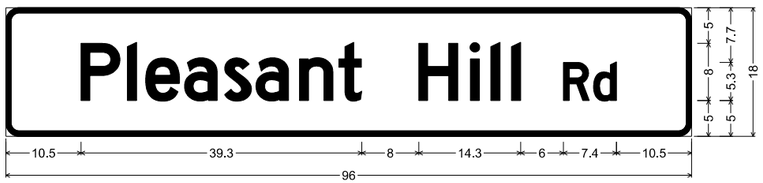
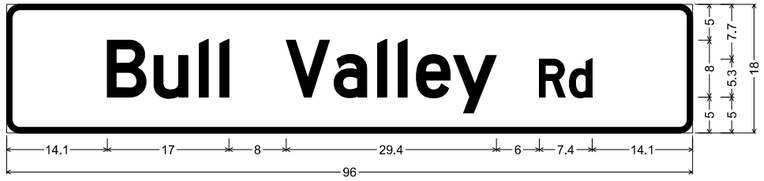


D3-1(3)_VARx18;
1.9" Radius, 0.8" Border, White on, Green;
"Pleasant Hill", D 2K; "Rd", D 2K;

DESIGN SERIES	AREA (SQ FT)	SHEETING TYPE	QTY. REQUIRED
D	12	ILLUM. SIGN (ZZ)	1



D3-1(3)_VARx18;
1.9" Radius, 0.8" Border, White on, Green;
"Bull Valley", D 2K; "Rd", D 2K;

DESIGN SERIES	AREA (SQ FT)	SHEETING TYPE	QTY. REQUIRED
D	12	ILLUM. SIGN (ZZ)	2

DESIGNED
DRAWN
REVIEWED

MODEL: Default
FILE NAME: pw:\\hansonlmc-pw.bentley.com:hanson-pw-01\Documents\19Jobs\19L0111\CAD - Use MicroStation V8i or PowerGeopak- SS10\RoadSheets\Std-LED_ST_NAME_SN.dgn

USER NAME = Pearc00397	DESIGNED -	REVISED -
	DRAWN - NN	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - JAP	REVISED -
PLOT DATE = 2/17/2023	DATE - -	REVISED -

PENTABLE NAME = ...\pen\LargeFormat_Plotter.tbl

PLOT DRIVER NAME = ...\HANSON_pdf_300dpi.pltcfg

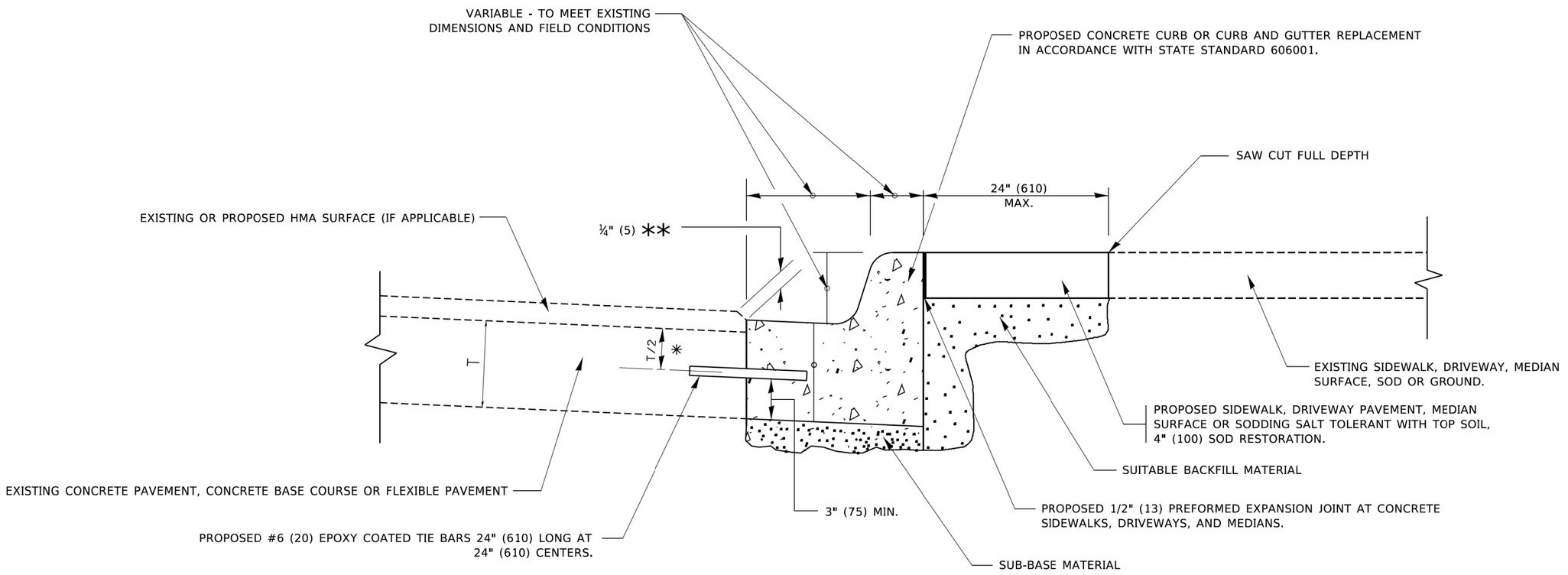
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LED ILLUMINATED
STREET NAME SIGNS

SCALE: | SHEET OF SHEETS | STA. | TO STA.

HPSI

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	34
	19L0111	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			



* 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.

** IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

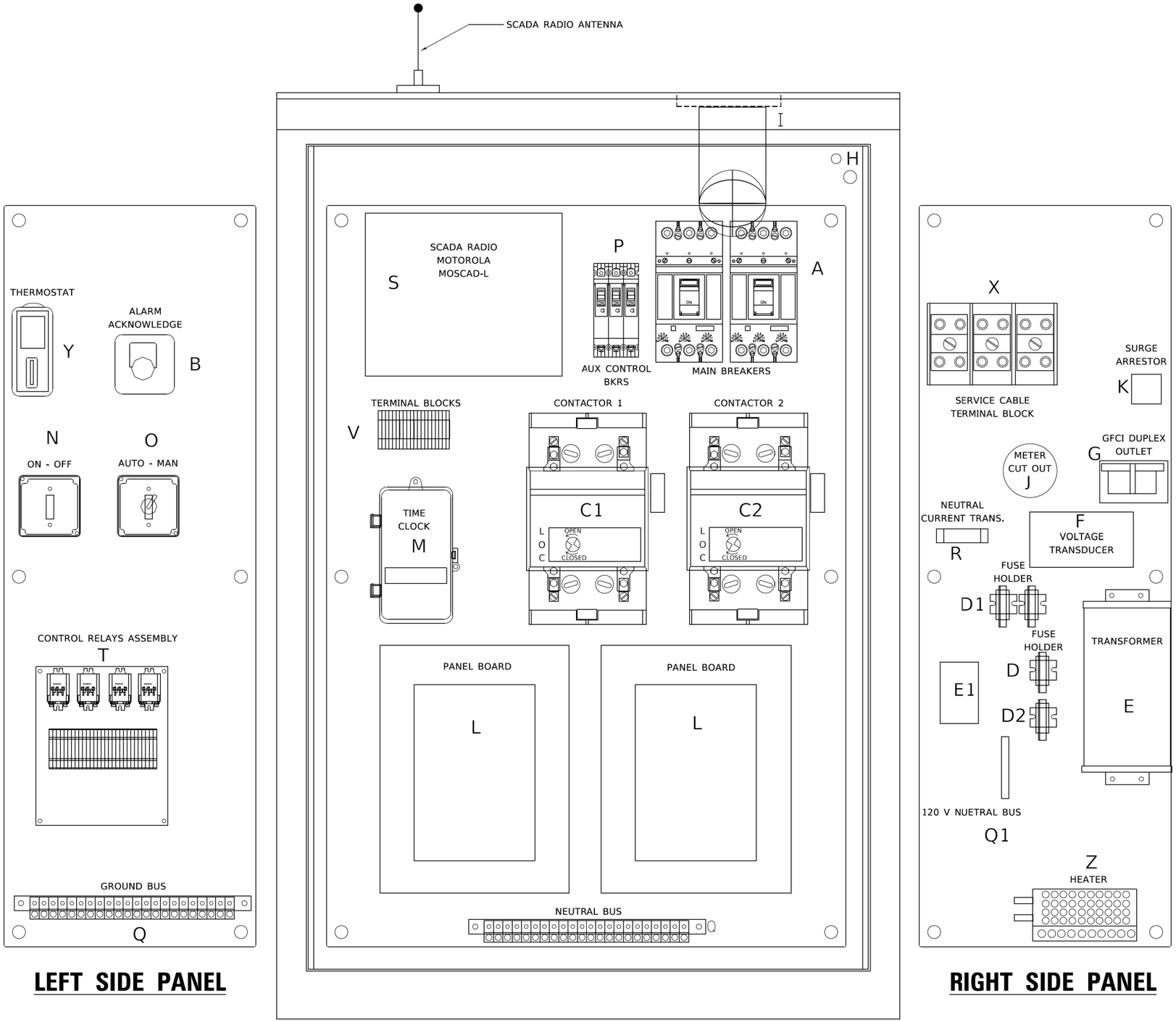
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

USER NAME = footemj	DESIGNED - A. HOUSEH	REVISED - A. ABBAS 03-21-97	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
	DRAWN -	REVISED - M. GOMEZ 01-22-01	
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - R. BORO 12-15-09	
PLOT DATE = 7/11/2019	DATE - 03-11-94	REVISED - K. SMITH 07-11-19	

CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	35
	BD600-06 (BD-24)	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			



LEFT SIDE PANEL

RIGHT SIDE PANEL

BILL OF MATERIALS

ITEM	QTY	DESCRIPTION
A	2	MAIN CIRCUIT BREAKERS 2 POLE 200 AMP WITH AUX CONTACT
B	1	ACKNOWLEDGE SWITCH, PUSH BUTTON WITH YELLOW INSERT
C1, C2 *	2	CONTACTOR 2 POLE 200 AMP 240V COIL WITH AUX CONTACTS
D	1	FINGERSAFE FUSE HOLDER WITH KTK - 20A FUSE
D1	2	FINGERSAFE FUSE HOLDER WITH KTK - ½ A FUSE
D2	1	FINGERSAFE FUSE HOLDER WITH KTK - 2A FUSE
E	1	2.0 KVA 277V-240/120 TRANSFORMER
E1	1	0.25 KVA240/ 120 - 24 VAC TRANSFORMER
F	1	VOLTAGE TRANSDUCER WITH COVER TERMINALS
G	1	20 AMP GFCI DUPLEX OUTLET W/COVER
H	2	DOOR SWITCH
I	1	LIGHT FIXTURE
J	1	METER FITTING 1 PHASE 3 WIRE 200 AMP
K	1	SURGE ARRESTER
L	2	PANEL BOARD 480/ 240V 1 PHASE, 250 AMP COPPER BUS
M	1	2 CHANNEL DIGITAL TIME CLOCK
N	1	MOMENTARY SWITCH ON - OFF
O	1	SQUARE D, 9001KS11BH13, 2 POSITION SWITCH IN 9001KY1 ENCLOSURE OR APPROVED EQUAL
P	2	BREAKER 1P 15A
Q	2	COPPER GROUND AND NEUTRAL BUS 1 X 16 X 1/4
Q1	1	COPPER NEUTRAL BUS WITH 1 #6 AND 8 #12 CONDUCTOR POINTS
R	1	CURRENT TRANSDUCER
S	1	MOTOROLA MOSCAD-L RADIO, 240 V
T *	1	CONTROL RELAY ASSEMBLY 240V COILS WITH 4 - 3PDT 25A RELAYS (W389ACX-15) (R1, R2, R3, R4). QTY 32 TERMINAL BLOCKS
V	20	TERMINAL BLOCKS
X *	1	620 AMP SPLICE BLOCK
Y	1	40-80 DEGREE THERMOSTAT
Z	1	375 WATT HEATER

* TERMINALS SHALL BE COVERED WITH
CLEAR PLEXIGLASS SHEET

MODEL: Default
FILE NAME: pw:\\plantroom.dot.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist51d22x34\CADData\CADSheets\be205.dgn

USER NAME = footemj	DESIGNED -	REVISED - R. TOMSONS 08-19-04	
	DRAWN -	REVISED - R. TOMSONS 05-11-09	
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - R. TOMSONS 03-10-10	
PLOT DATE = 4/19/2019	DATE -	REVISED - R. TOMSONS 03-29-12	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING CONTROLLER, BASE MOUNTED,
480VOLT, 200AMP (DUAL) RADIO SCADA

SCALE: NONE | SHEET 1 OF 4 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	36
	BE-205	CONTRACT NO. 61J51		
		ILLINOIS	FED. AID PROJECT	

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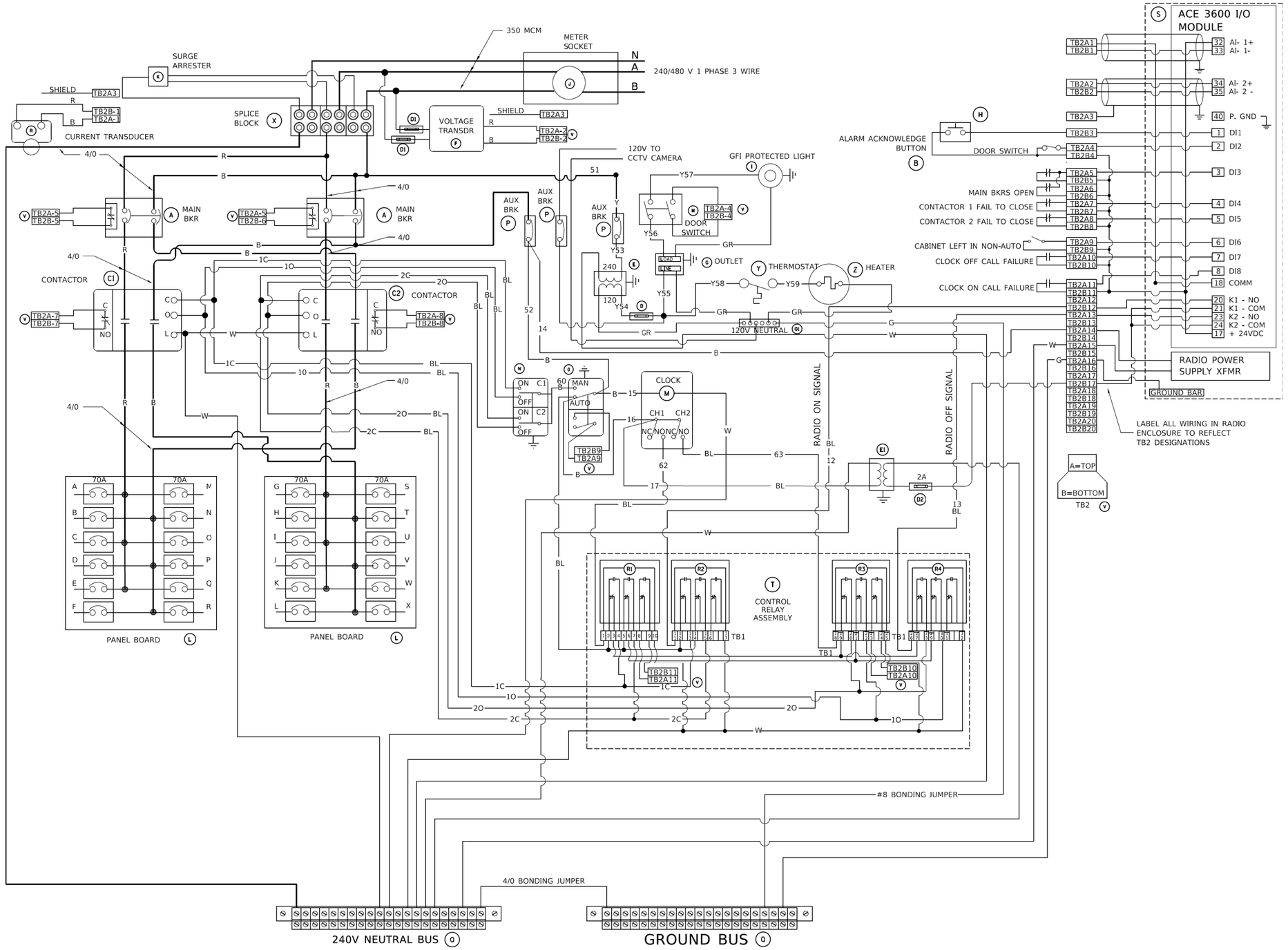

BILL OF MATERIALS

ITEM	QTY	DESCRIPTION
A	2	MAIN CIRCUIT BREAKERS 2 POLE 200 AMP WITH AUX CONTACT
B	1	ACKNOWLEDGE SWITCH, PUSH BUTTON WITH YELLOW INSERT
C1, C2 *	2	CONTACTOR 2 POLE 200 AMP 240V COIL WITH AUX CONTACTS
D	1	FINGERSAFE FUSE HOLDER WITH KTK - 20A FUSE
D1	2	FINGERSAFE FUSE HOLDER WITH KTK - ½ A FUSE
D2	1	FINGERSAFE FUSE HOLDER WITH KTK - 2A FUSE
E	1	2.0 KVA 277V-240/120 TRANSFORMER
E1	1	0.25 KVA240/ 120 - 24 VAC TRANSFORMER
F	1	VOLTAGE TRANSDUCER WITH COVER TERMINALS
G	1	20 AMP GFCI DUPLEX OUTLET W/COVER
H	2	DOOR SWITCH
I	1	LIGHT FIXTURE
J	1	METER FITTING 1 PHASE 3 WIRE 200 AMP
K	1	SURGE ARRESTER
L	2	PANEL BOARD 480/ 240V 1 PHASE, 250 AMP COPPER BUS
M	1	2 CHANNEL DIGITAL TIME CLOCK
N	1	MOMENTARY SWITCH ON - OFF
O	1	SQUARE D, 9001KS11BH13, 2 POSITION SWITCH IN 9001KY1 ENCLOSURE OR APPROVED EQUAL
P	2	BREAKER 1P 15A
Q	2	COPPER GROUND AND NEUTRAL BUS 1 X 16 X 1/4
Q1	1	COPPER NEUTRAL BUS WITH 1 #6 AND 8 #12 CONDUCTOR POINTS
R	1	CURRENT TRANSDUCER
S	1	MOTOROLA MOSCAD-L RADIO, 240 V
T *	1	CONTROL RELAY ASSEMBLY 240V COILS WITH 4 - 3PDT 25A RELAYS (W389ACX-15) (R1, R2, R3, R4). QTY 32 TERMINAL BLOCKS
V	20	TERMINAL BLOCKS
X *	1	620 AMP SPLICE BLOCK
Y	1	40-80 DEGREE THERMOSTAT
Z	1	375 WATT HEATER

* TERMINALS SHALL BE COVERED WITH CLEAR PLEXIGLASS SHEET

MODEL: Default
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PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - R. TOMSONS 03-10-10	
PLOT DATE = 4/19/2019	DATE -	REVISED - R. TOMSONS 03-29-12	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING CONTROLLER, BASE MOUNTED, 480VOLT, 200AMP (DUAL) RADIO SCADA

SCALE: NONE | SHEET 2 OF 4 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	37
	BE-205	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			

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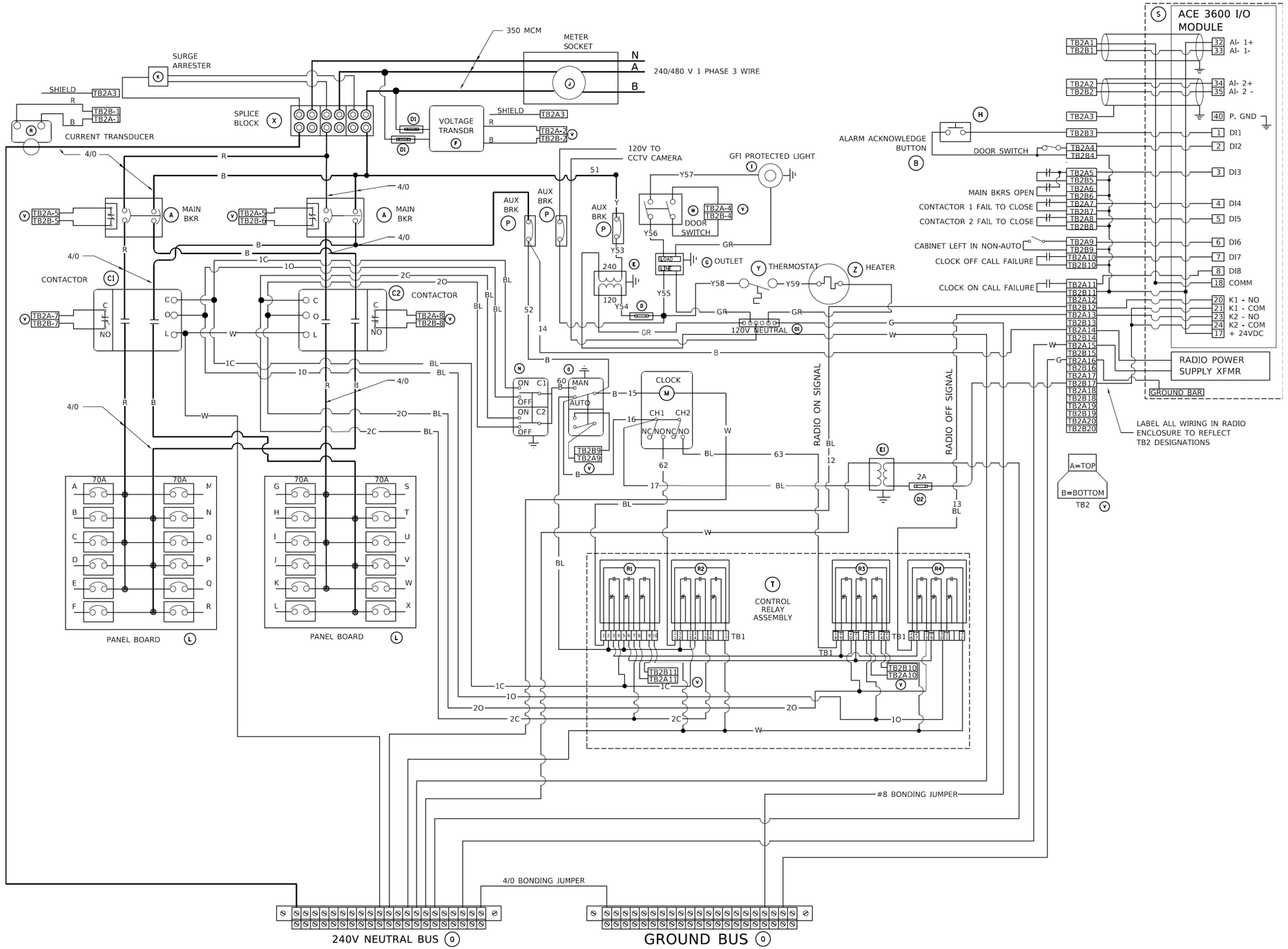

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E	1	2.0 KVA 277V-240/120 TRANSFORMER
E1	1	0.25 KVA240/ 120 - 24 VAC TRANSFORMER
F	1	VOLTAGE TRANSDUCER WITH COVER TERMINALS
G	1	20 AMP GFCI DUPLEX OUTLET W/COVER
H	2	DOOR SWITCH
I	1	LIGHT FIXTURE
J	1	METER FITTING 1 PHASE 3 WIRE 200 AMP
K	1	SURGE ARRESTER
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M	1	2 CHANNEL DIGITAL TIME CLOCK
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Z	1	375 WATT HEATER

* TERMINALS SHALL BE COVERED WITH CLEAR PLEXIGLASS SHEET

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PLOT DATE = 4/19/2019	DATE -	REVISED - R. TOMSONS 03-29-12	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING CONTROLLER, BASE MOUNTED, 480VOLT, 200AMP (DUAL) RADIO SCADA

SCALE: NONE | SHEET 2 OF 4 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	38
	BE-205	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			

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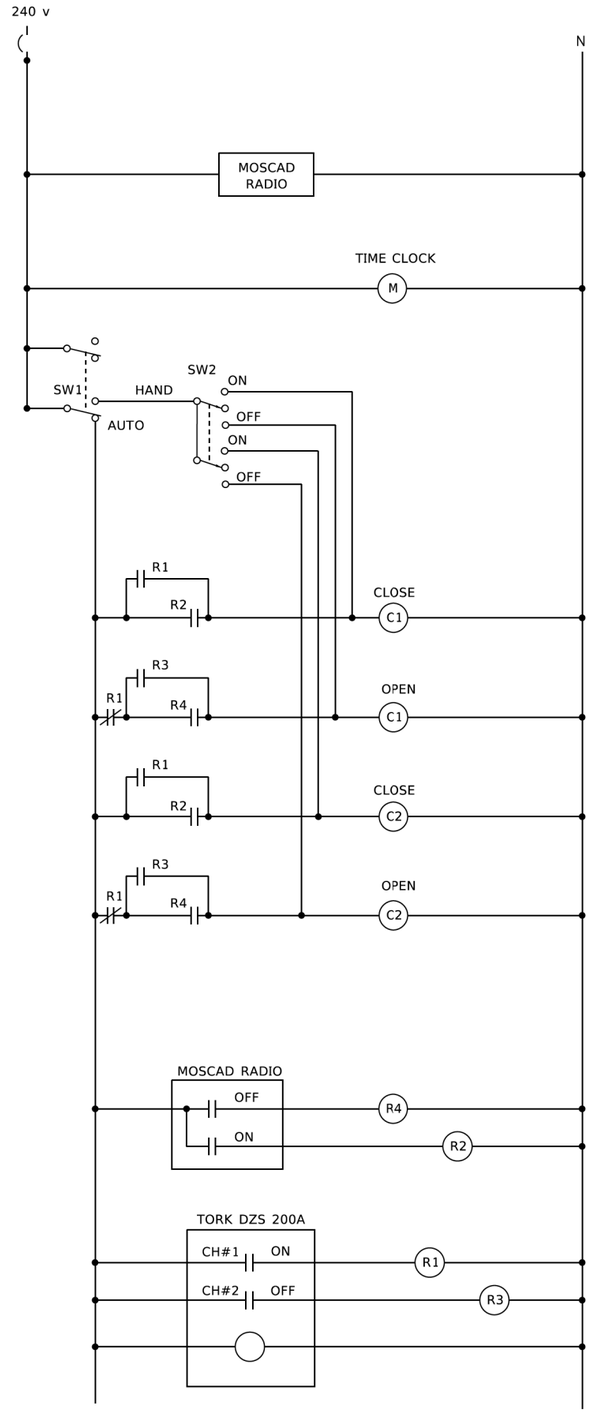
NOTES

1. CABINET SHALL BE FABRICATED FROM 0.125-INCH (3.175) SHEET ALUMINUM #3003H14, FORMED AND ARC WELDED.
2. ALL SCREWS AND HARDWARE SHALL BE PLATED, GALVANIZED, OR MADE OF BRASS, ALUMINUM OR STAINLESS STEEL, UNLESS OTHERWISE NOTED.
3. NAME PLATE SHALL HAVE ENGRAVED 0.75-INCH (19.05) HIGH LETTERS FILLED IN BLACK: "STATE OF ILLINOIS LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.
4. ONE INCH THICK POLYISOCYANURATE INSULATION SHALL BE INSTALL AND PERMANENTLY CEMENTED ON ALL SIDES OF THE CABINET AND DOORS.
5. CABINET SHALL BE PRIMED AND PAINTED AS SPECIFIED.
6. ELECTRIC UTILITY METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET AS SHOWN ON THE PANEL LAYOUT DIAGRAM.
7. THE COMPLETED CONTROLLER SHALL BE U.L. LISTED AS AN INDUSTRIAL CONTROL PANEL UNDER UL508.
8. METAL MOUNTING PANEL SHALL BE FABRICATED FROM THE SAME MATERIAL AS THE CABINET AND SHALL BE FLANGED BACK 0.75-INCHES I.D. ON 4 SIDES.
9. CIRCUIT BREAKERS AND CONTACTORS AND OTHER COMPONENTS SHALL BE MOUNTED ON 0.125-INCH (3.175) THICK GLASTIC INSULATION BACK PANEL.
10. ALL DEVICES SHALL BE FRONT REMOVABLE.
11. TIME CLOCK CHANNEL 1 N.O. CONTACT IS CLOSED NIGHT AND OPEN DAY (LIGHTS ON).
12. SET LATITUDE TO 42 DEGREES. SET CH.1 TO 23 MINUTES AFTER ASTRONOMICAL SUNSET, 50 MINUTES BEFORE ASTRONOMICAL SUNRISE. SET CH.2 TO 60 MINUTES AFTER ASTRONOMICAL SUNSET (WITH A SIGNAL LENGTH OF 1 SECOND), +28 MINUTES AFTER ASTRONOMICAL SUNRISE (WITH A SIGNAL LENGTH OF 7 SECONDS.)
13. BUS BAR SHALL HAVE 22 LUG TERMINALS SIZED TO ACCOMMODATE REQUIRED WIRE SIZES. 240V NEUTRAL BUS SHALL BE PAINTED WHITE, GROUND BUS SHALL BE PAINTED GREEN, AND THE 120V NEUTRAL BUS SHALL BE PAINTED GREY.
14. ALL LUGS SHALL BE OF COPPER SCREWS AND CONNECTORS, SPRING HELD.
15. ALL WIRING TERMINATIONS SHALL BE RATED NOT LESS THAN 75 DEGREE CENTIGRADE.
16. ALL CONTROL WIRING SHALL BE 600V #12 TYPE MTW, SCADA WIRING SHALL BE #18.
17. ALL POWER WIRING SHALL BE 600V TYPE RHH/RHW.
18. ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED:

R = RED	Y = YELLOW
B = BLACK	W = WHITE
BL = BLUE	G = GREEN
	G = GREY

19. MOSCAD I/O WIRING SHALL BE:
    DIGITAL INPUT (DI) WIRING SHALL BE #18 MTW PURPLE.
    ANALOG INPUT (AI) WIRING SHALL BE #18, 2/C SHIELDED.
    AI AND DI WIRING MAY BE BUNDLED TOGETHER, BUT SHALL NOT BE BUNDLED WITH OTHER WIRING.
20. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED.
21. SCHEMATIC SHOWN WITH BREAKER OPEN, CONTACTOR OPEN, CABINET DOOR CLOSED, CLOCK NOT ACTIVE (DE-ENERGIZED STATE).
22. A LAMINATED COPY OF THE CIRCUIT SCHEMATIC AND SCADA I/O DIAGRAM (NO SMALLER THAN 11"x17" EACH) SHALL BE ATTACHED TO THE INSIDE OF THE CONTROLLER WITH STAINLESS STEEL SCREWS.



CONTROL CIRCUIT LADDER LOGIC DIAGRAM

MOSCAD I/O ASSIGNMENTS

TERM	MOSCAD DESTINATION	DESCRIPTION OF INPUT
1	DIGITAL INPUT 1	ALARM KNOWLEDGE
2	DIGITAL INPUT 2	DOOR OPEN
3	DIGITAL INPUT 3	MAIN(S) BREAKER OPEN
4	DIGITAL INPUT 4	CONTACTOR 1 OPEN
5	DIGITAL INPUT 5	CONTACTOR 2 OPEN
6	DIGITAL INPUT 6	CABINET IN NON-AUTO
7	DIGITAL INPUT 7	BACK-UP CLOCK OFF CALL
8	DIGITAL INPUT 8	BACK-UP CLOCK ON CALL
17	24 V+	24+VDC
18	DI COMMON	COMMON
21	K1 C	K1 COMMON
22	K1 NO	LIGHTS ON CALL
24	K2 C	K2 COMMON
25	K2 NO	LIGHTS OFF CALL
32	ANALOG INPUT 1 (+)	CABINET NEUTRAL CURRENT
33	ANALOG INPUT 1 (-)	CABINET NEUTRAL CURRENT
34	ANALOG INPUT 2 (+)	CABINET SERVICE VOLTAGE
35	ANALOG INPUT 2 (-)	CABINET SERVICE VOLTAGE
40	P. GROUND	GROUND

ALL ANALOG INPUTS WILL BE 4-20 MA ONLY. DIGITAL OUTPUT RELAYS WILL BE ELECTRICALLY ENERGIZED AND MOMENTARILY HELD

MIXED I/O MODULE MODEL NUMBER V436

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PLOT DATE = 4/19/2019	DATE -	REVISED - R. TOMSONS 03-29-12	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING CONTROLLER, BASE MOUNTED, 480VOLT, 200AMP (DUAL) RADIO SCADA

SCALE: NONE | SHEET 4 OF 4 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	39
	BE-205	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			

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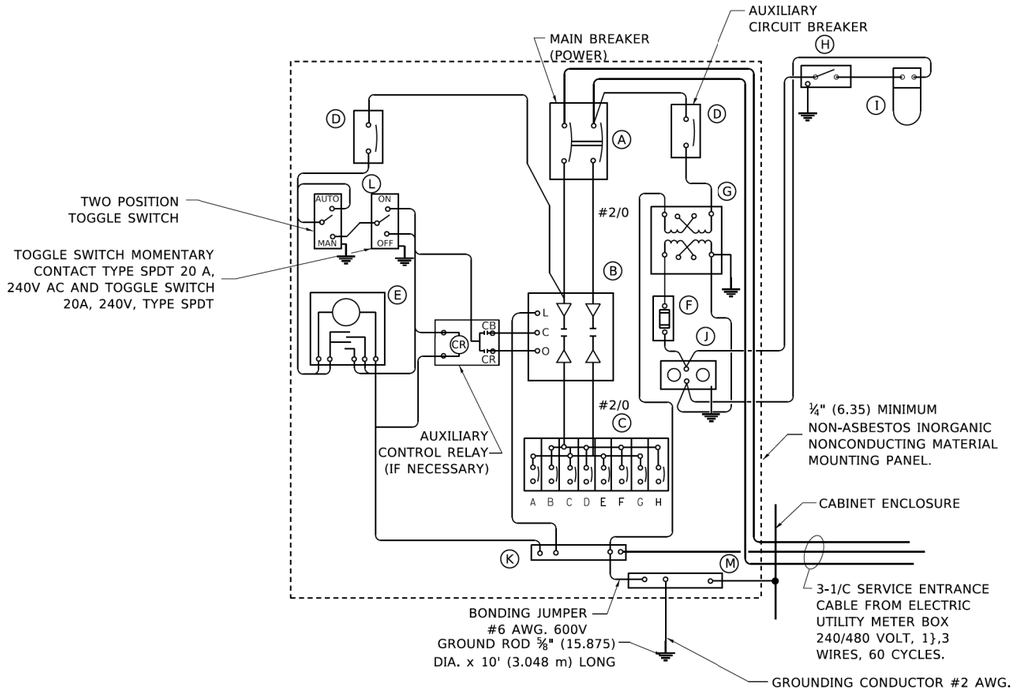
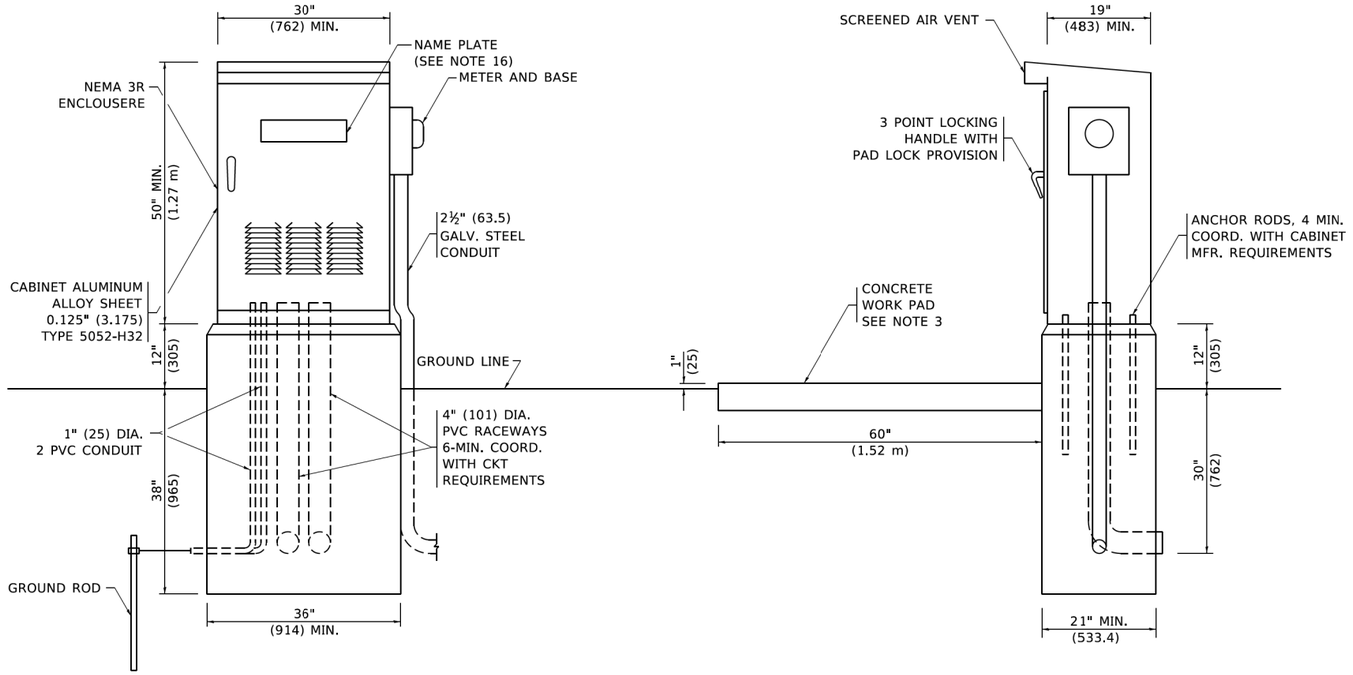


PANEL WIRING DIAGRAM

PANEL EQUIPMENT

BILL OF MATERIAL		
ITEM	QUANTITY	DESCRIPTION
A	1	MAIN CIRCUIT BREAKER, 2 POLE, 600 VOLT 100 AMP. FRAME, 100 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-22000 AMP. AT 480 VOLT.
B	1	REMOTE CONTROL SWITCH, ELECTRICALLY OPERATED, MECHANICALLY HELD, 2 POLE, SINGLE THROW, 100 AMP., 600 VOLTS CONTROL CIRCUIT 240 VOLT.
C	8	CIRCUIT BREAKERS, 1 POLE, 100AMP. FRAME, 50 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-10,000 AMP. AT 240 V.
D	2	CONTROL CIRCUIT-CIRCUIT BREAKER. 1 POLE, 240 V., 100 AMP. FRAME, 15 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-5000 AMP. AT 240 V.
E	1	ASTRONOMIC MICROPROCESSOR-BASED 2-CHANNEL CONTROLLER (TIME SWITCH).
F	1	20 AMP, 120 VOLT FUSE.
G	1	1.5 KVA, SINGLE PHASE, ENCAPSULATED TRANSFORMER 240 X 480 / 120 X 240 VOLT, 60 Hz.
H	1	SPST 20A SWITCH ON DOOR, TO TURN LIGHT ON WHEN DOOR IS OPEN,
I	1	INCANDESCENT LIGHTING FIXTURE ENCLOSED AND GASKETED WITH 60 WATT, 120 V. LAMP.
J	1	20 AMP, 120 VOLT, DUPLEX RECEPTACLE, GFCI.
K	1	COPPER GROUND BUS 1#4" (6.35) X 1" (25.4) X 12" (304.8 mm) LONG MOUNTED ON PANEL WITH LUGS AND 4 SPARE LUGS
L	1	TOGGLE SWITCHES MOUNTED IN 4" (101.6) X 4" (101.6 mm) BOX.
M	1	COPPER GROUND BUS 1#4" (6.35) X 1" (25.4) X 12" (304.8 mm) LONG MOUNTED ON PANEL WITH LUGS AND SPARE LUGS.



NOTES

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. FOUNDATION SIZE SHALL BE COORDINATED WITH CABINET SIZE AND MFR.
3. IN FRONT OF CONTROL CABINET DOOR, REMOVE VEGETATION AND 2'' (50.8 mm) TOP SOIL, LEVEL THE AREA AND ON TOP, PLACE LENGTH WISE PARALLEL TO CONTROL CABINET, A CONCRETE PAD 36'' (914.4 mm) x 60" (18.288 m) x 4'' (101 mm) MIN. SIZE. THE COST OF LABOR AND MATERIALS ARE INCLUDED IN THE COST OF THE CONTROLLER.
4. DOOR SHALL BE CONSTRUCTED FROM SAME TYPE OF MATERIAL AND THICKNESS AS CABINET.
5. DOOR SHALL BE EQUIPPED WITH THREE POINT LATCHING MECHANISM WITH NYLON ROLLERS AT TOP THE BOTTOM.
6. DOOR HINGE SHALL BE A HEAVY GAUGE CONTINUOUS HINGE WITH A 1#4" (6.35 mm) DIA. STAINLESS STEEL HINGE PIN.
7. ALL EXTERNAL HARDWARE SHALL BE STAINLESS STEEL.
8. CONTROL WIRING TO BE #12 AWG, 600V, TYPE "SIS" GRAY SWITCH BOARD WIRE, STRANDED COPPER.
9. METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET, NEAR TO THE SERVICE POLE.
10. CABINETS SHALL BE PRIMED AND PAINTED AS SPECIFIED.
11. THE HEADS OF CONNECTORS SCREWS SHALL BE PAINTED WHITE FOR NEUTRAL BAR CONNECTION AND GREEN FOR GROUND BAR CONNECTORS.
12. ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED.
    R = RED BL = BLUEW = WHITE
    B = BLACK Y = YELLOW G = GREEN
13. PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
14. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
15. THE CONTROLLER SHALL BE CONSTRUCTED TO U.L. STD. 508 AND BEAR THE U.L. LABEL "ENCLOSED INDUSTRIAL CONTROL PANEL".
16. 12" (304.8) X 16" (406.4 mm) STAINLESS STEEL EXTERIOR NAMEPLATE SHALL BE ENGRAVED TO "STATE OF ILLINOIS LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.

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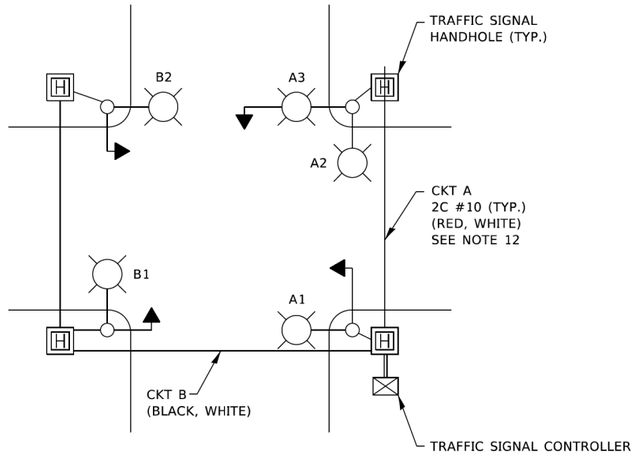
	DRAWN -	REVISED -	
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 4/19/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING CONTROLLER
SINGLE DOOR

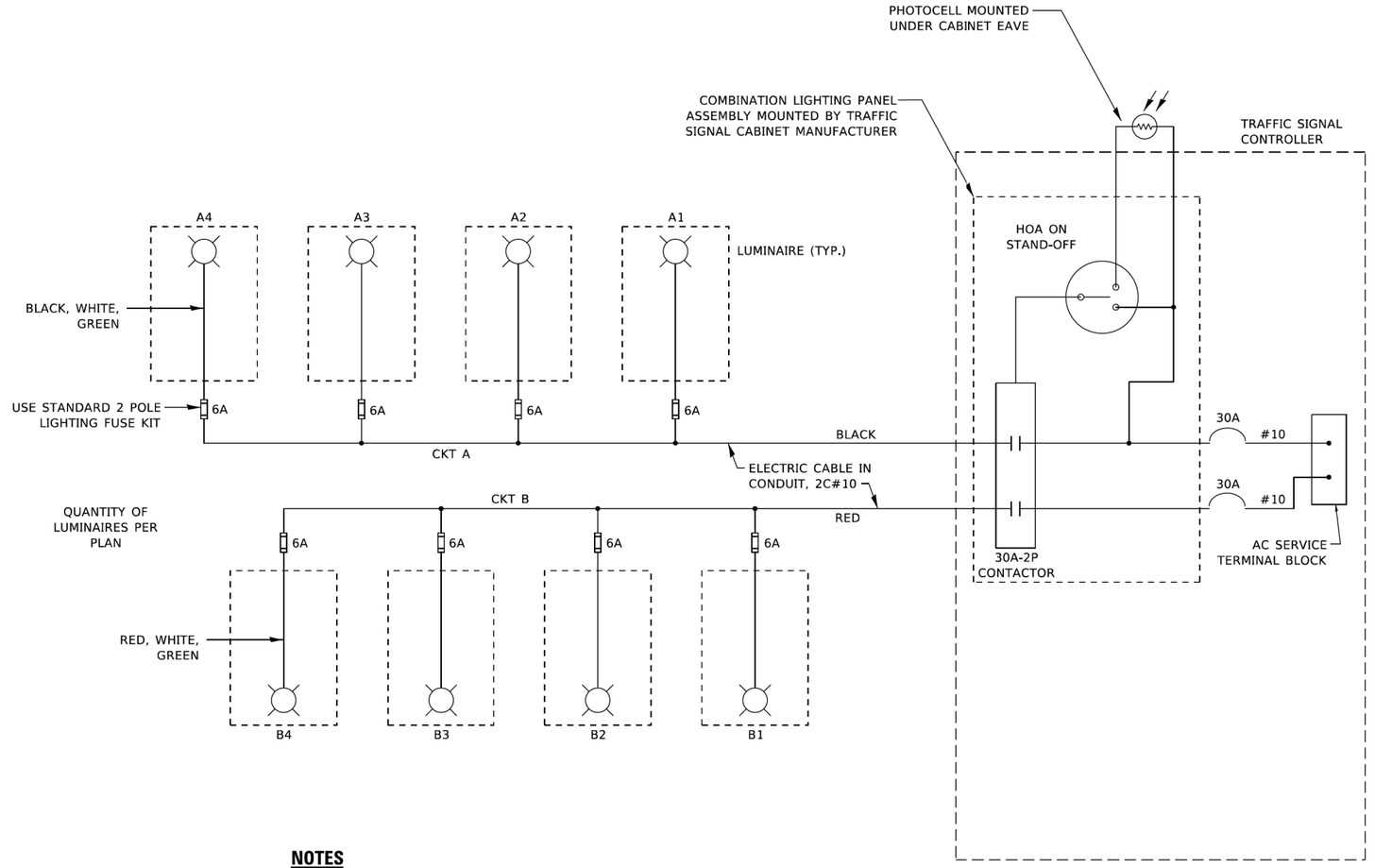
SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

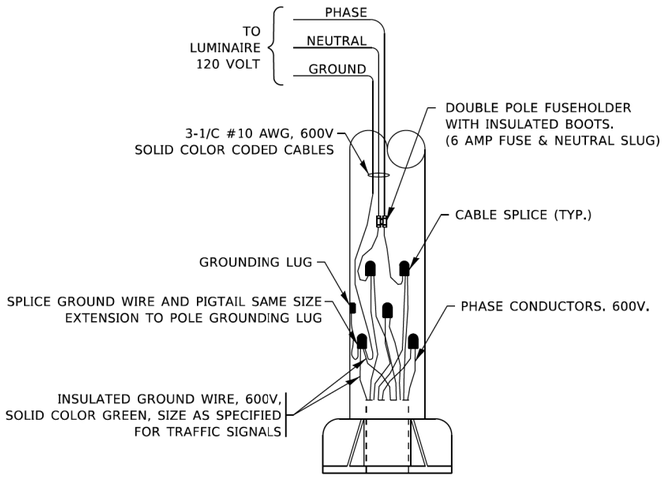
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	40
	BE-215	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			



TYPICAL LIGHTING CIRCUIT

(NOT TO SCALE)





COMBINATION POLE WIRING DETAIL

(NOT TO SCALE)

NOTES

1. 4 LUMINAIRES PER CIRCUIT, MAXIMUM.
2. TWO #10 (XLP-TYPE USE) CABLES TO BE USED FOR LIGHTING CIRCUITS.
3. ROUTE LIGHTING CIRCUITS IN TRAFFIC SIGNAL CONDUIT SYSTEM.
4. ALL SPLICES AND CONNECTIONS FOR ROADWAY LIGHTING SHALL BE AT POLE BASE ONLY.
5. FOR LIGHTING CIRCUITS, CONNECT TWO CIRCUIT BREAKERS TO AC SERVICE TERMINAL BLOCK.
6. ALL WIRING SHALL BE NEATLY DRESSED, IDENTIFIED BY TAGS, AND SUPPORTED. (UNDERGROUND SPLICING OF LIGHTING CONDUCTORS IS NOT PERMITTED).
7. THE H.O.A. SWITCH SHALL BE LABELED AS "LIGHTING CONTROL" WITH THE POSITIONS "AUTO", "OFF" AND "TEST" WITH ENGRAVED NAME PLATES.
8. LIGHTING CONNECTED TO UPS BYPASS CIRCUIT.
9. COMBINATION LIGHTING MUST BE INSTALLED PRIOR TO SIGNAL TURN ON.
10. LUMINAIRE VOLTAGE SHALL BE 120V
11. POLE WIRING & FUSE KITS ARE INCLUDED IN THE LUMINAIRE PAY ITEM.
12. THE UNDERGROUND EQUIPMENT GROUND WIRE IS SHOWN IN THE TRAFFIC SIGNAL PLANS AND IS INCLUDED IN THE SIGNAL PLANS. IT IS SHARED GROUND BETWEEN SIGNALS AND LIGHTING.

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PLOT SCALE = 100.0000 ' / In.	CHECKED - RT	REVISED - T.G. 8/03/2021	
PLOT DATE = 5/5/2022	DATE - 08/18/2014	REVISED - T.G. 5/05/2022	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

COMBINATION LIGHTING, TRAFFIC SIGNAL SCHEMATIC

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	41
	BE-240	CONTRACT NO. 61J51		
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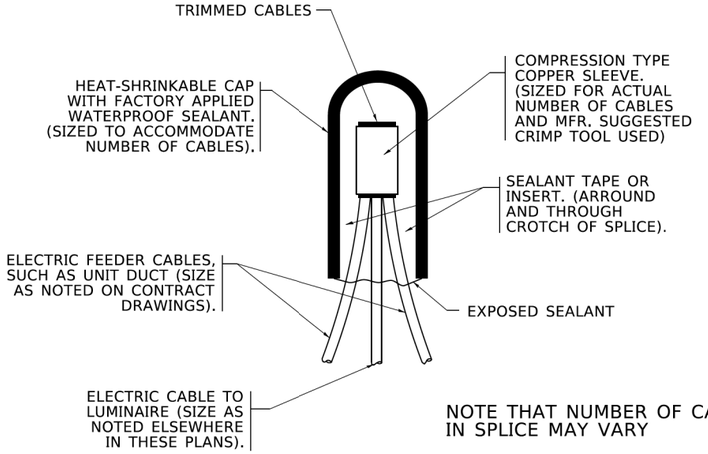

NOTE THAT NUMBER OF CABLES IN SPLICE MAY VARY

TYPICAL SPLICE DETAIL
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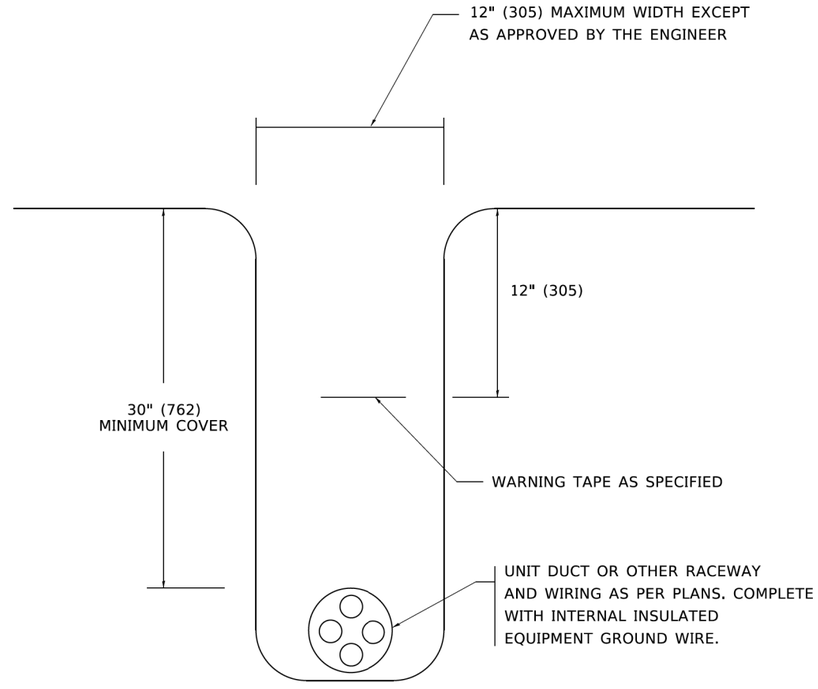
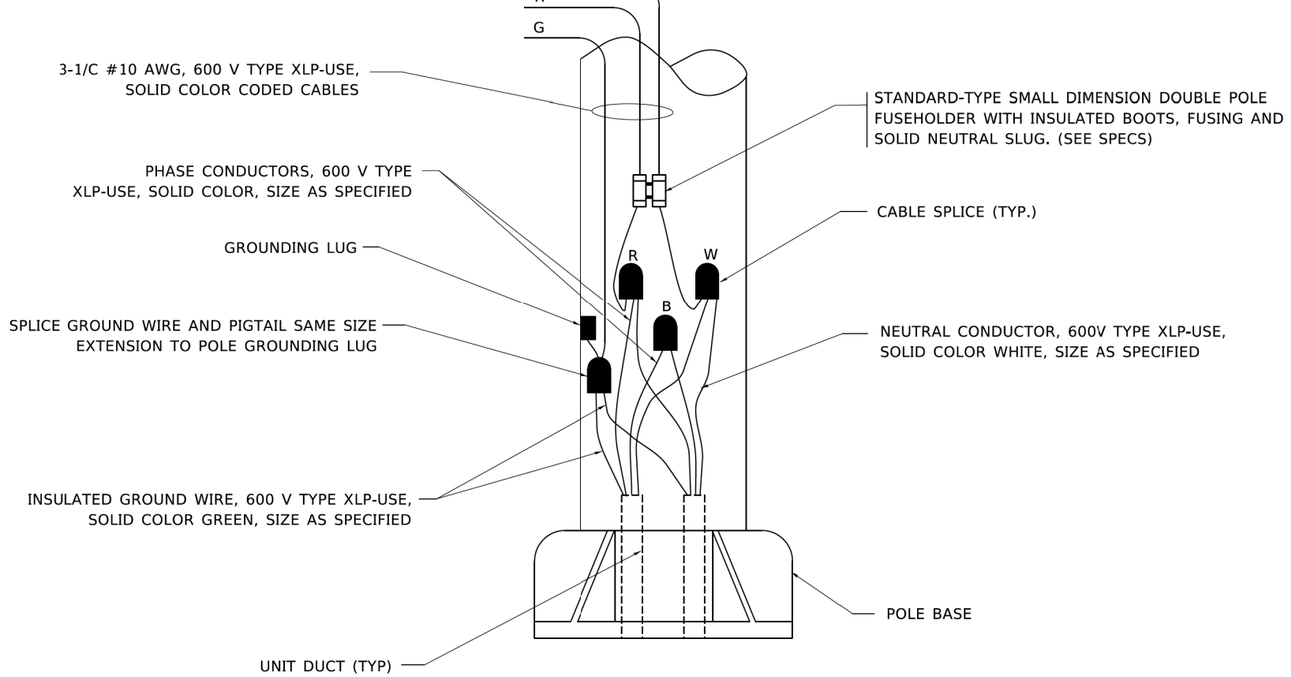


TYPICAL WIRING IN TRENCH DETAIL
N.T.S.



POLE WIRING DETAIL
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PLOT DATE = 3/2/2020	DATE - 08/08/2003	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISC. ELECTRICAL DETAILS
SHEET A

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	42
	BE-702	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			

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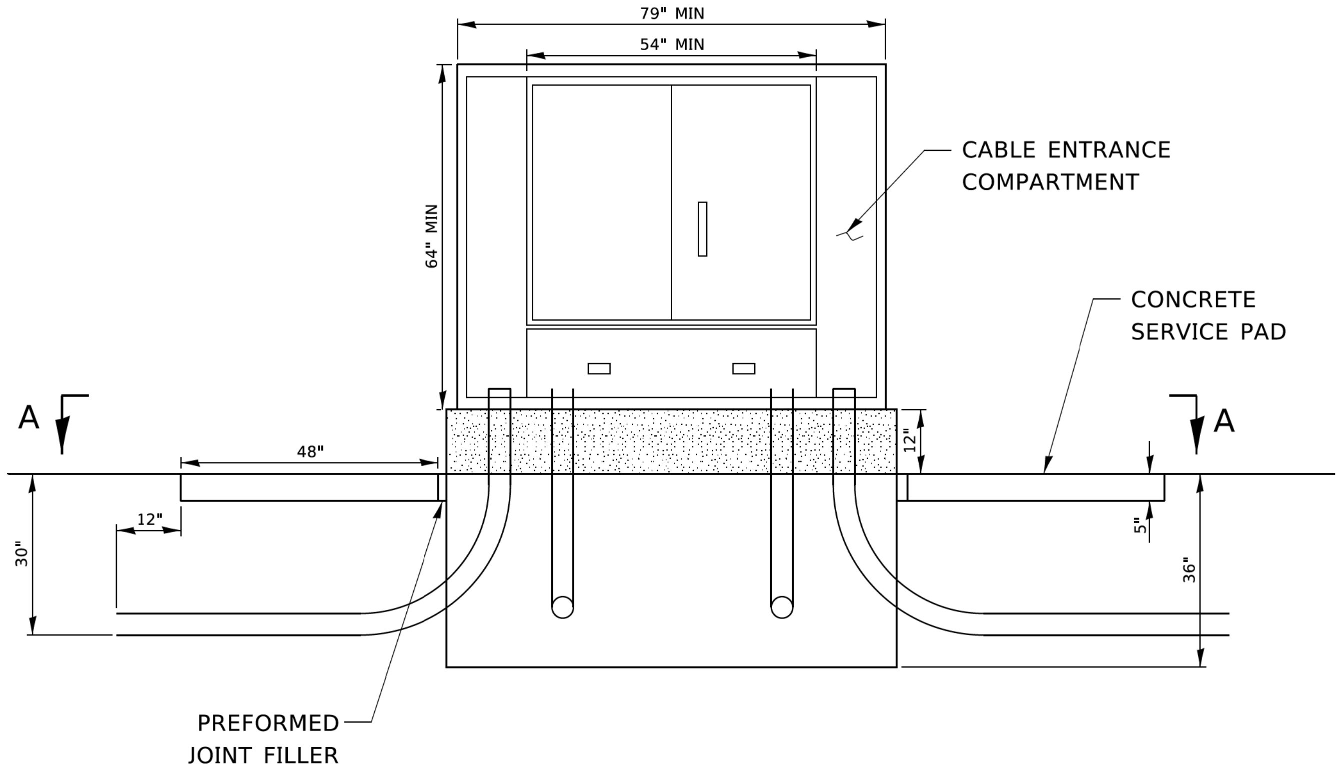
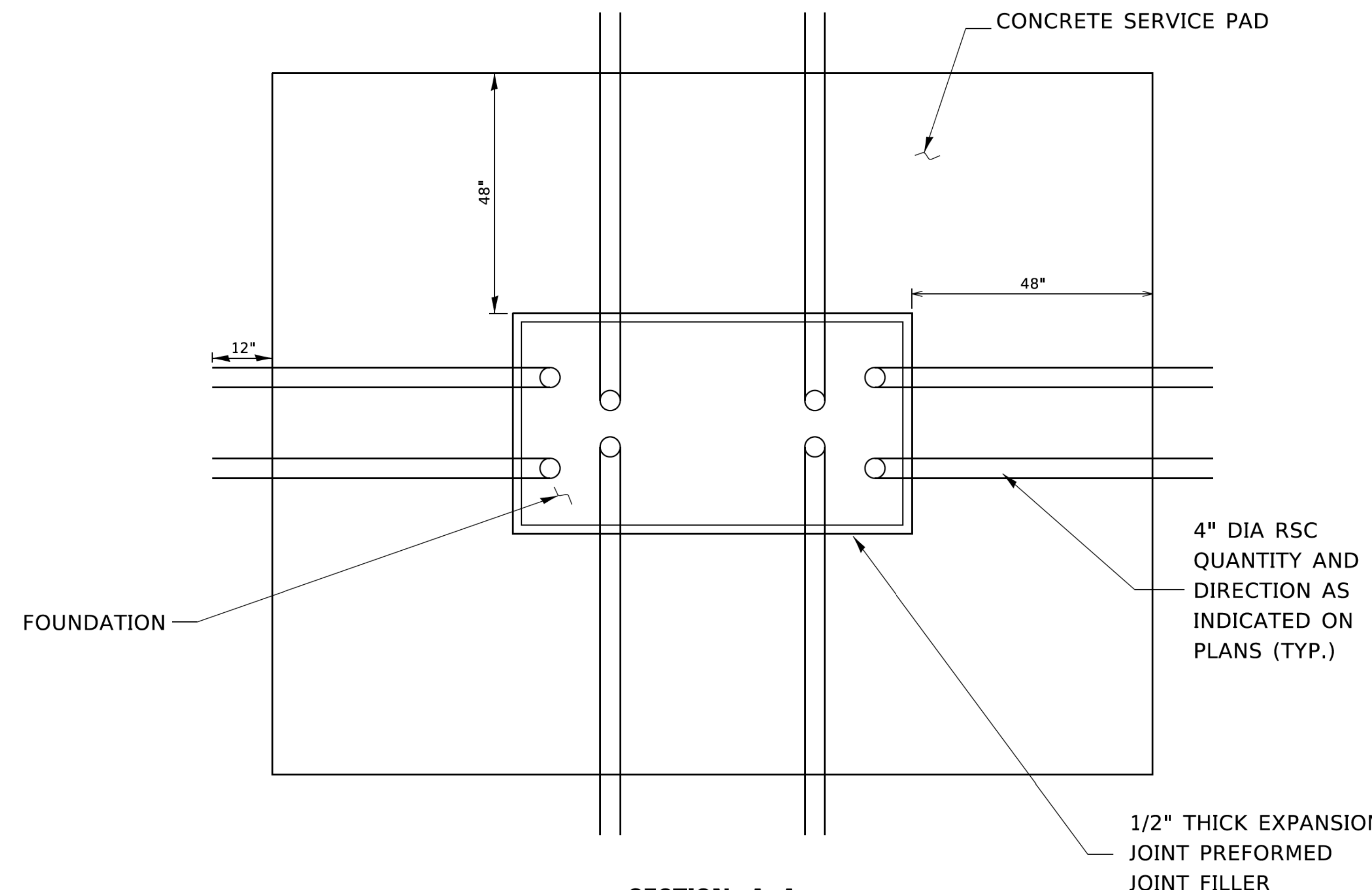


ELEVATION VIEW



SECTION A–A

NOTES:

CABINET:
ALUMINUM 5052-H32

HARDWARE:
TYPE 304 STAINLESS STEEL

FINISH:
POLYESTER POWDER COATED GRAY

RACKS:
3/16" STEEL E.I.A. / T.I.A. SPACING (10-32 THREADS)

DOORS:
3 POINT LATCH, LATCH CONTROL SWITCH, PIANO HINGE, WIND STOP

CABLE ENTRANCE COMPARTMENT:
FOUR SLACK STORAGE BRACKETS WITH HEAVY DUTY VELCRO STRAPS TO SECURE CABLES,
TWO ENTRY HOLES FOR BRINGING CABLES INTO THE MAIN CABINET

MAIN CABINET:
2-9"-23" ADJUSTABLE WIDTH RACKS, ADJUSTABLE FRONT TO REAR POSITION (43" TALL)
2-19"-23" ADJUSTABLE WIDTH RACKS, SWING OUT (40" TALL)
166" OF TOTAL INCHES OF RACK SPACE (95 RU)
4-15" WATT SHATTER-SHIELD LIGHT FIXTURES

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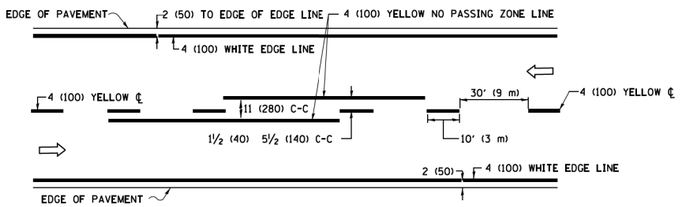
USER NAME = footemj	DESIGNED - R. TOMSONS	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 4/22/2019	DATE - 05-02-16	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

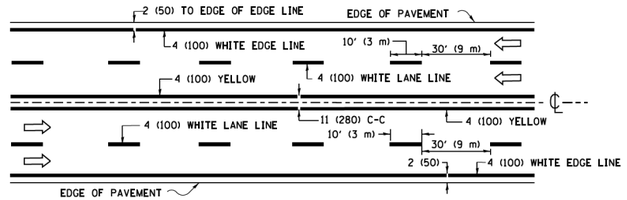
FIBER OPTIC INTERCONNECT CABINET

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. TO STA.

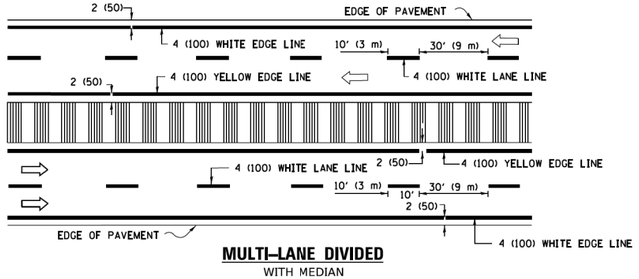
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	43
	BE-1050	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			



2–LANE ROADWAY

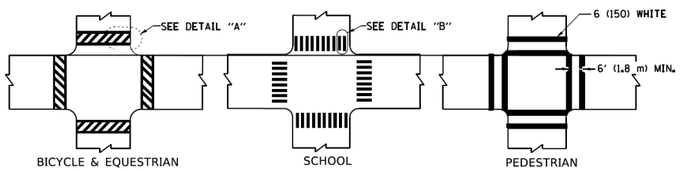


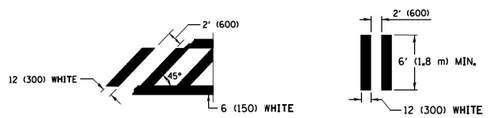
MULTI–LANE UNDIVIDED



MULTI–LANE DIVIDED
WITH MEDIAN

TYPICAL LANE AND EDGE LINE MARKING

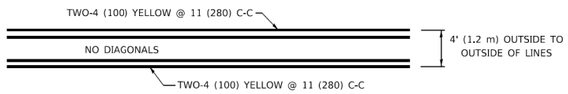




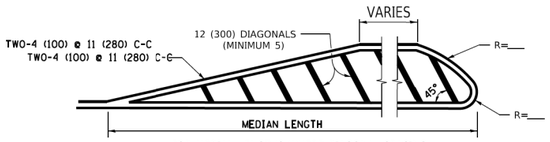
DETAIL "A" **DETAIL "B"**

TYPICAL CROSSWALK MARKING

✳ MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES



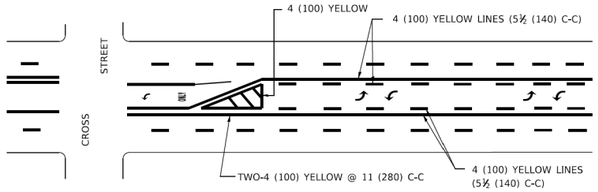
4' (1.2 m) WIDE MEDIANS ONLY



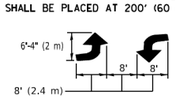
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

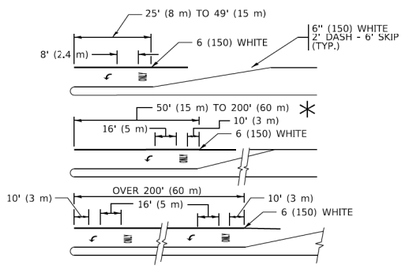


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO–WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

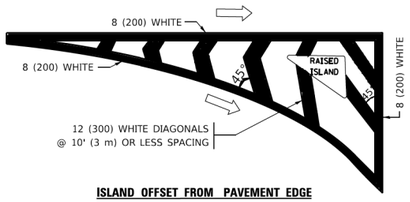


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
AREA = 15.6 SQ. FT. (1.5 m²) **ONLY** AREA = 20.8 SQ. FT. (1.9 m²)

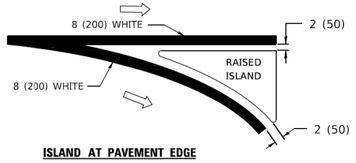
✳ TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

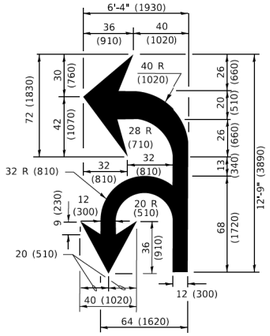


ISLAND OFFSET FROM PAVEMENT EDGE

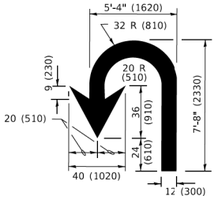


ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING

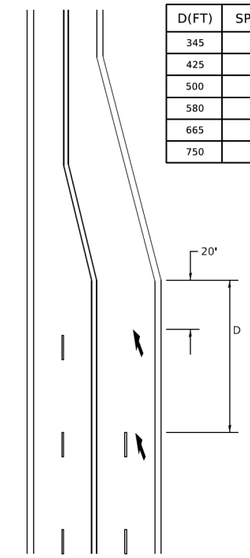


COMBINATION LEFT AND U–TURN



U–TURN

D(FT)	SPEED LIMIT
345	30
425	35
500	40
580	45
665	50
750	55



LANE REDUCTION TRANSITION

✳ LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MEDIANS IN YELLOW
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT, OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m² EACH "X"=54.0 SQ. FT. (5.0 m²
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS ≥ 8')	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 SF

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.

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USER NAME = footemj	DESIGNED - EVERS	REVISED - C. JUCIUS 09-09-09	
	DRAWN -	REVISED - C. JUCIUS 07-01-13	
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - C. JUCIUS 12-21-15	
PLOT DATE = 3/4/2019	DATE - 03-19-90	REVISED - C. JUCIUS 04-12-16	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

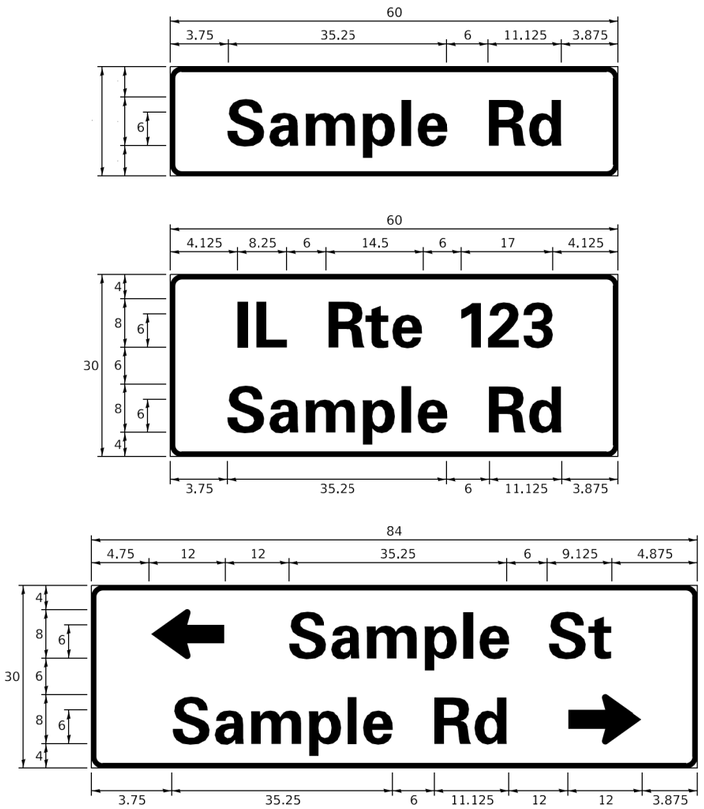
DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE | SHEET 1 OF 2 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	44
	TC–13	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			

3/4/2019 10:34:32 AM User:footemj

SIGN PANEL – TYPE 1 OR TYPE 2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D OR C	-	1 OR 2	ZZ	-

COMMON STREET NAME ABBREVIATIONS AND WIDTHS

NAME	ABBREVATION	WIDTH (INCH)	
		SERIES "C"	SERIES "D"
AVENUE	Ave	15.000	18.250
BOULEVARD	Blvd	17.125	20.000
CIRCLE	Cir	11.125	13.000
COURT	Ct	8.250	9.625
DRIVE	Dr	8.625	10.125
HIGHWAY	Hwy	18.375	22.000
ILLINOIS	IL	7.000	8.250
LANE	Ln	9.125	10.750
PARKWAY	Pkwy	23.375	27.375
PLACE	Pl	7.125	7.750
ROAD	Rd	9.625	11.125
ROUTE	Rte	12.625	14.500
STREET	St	8.000	9.125
TERRACE	Ter	12.625	14.625
TRAIL	Tr	7.750	9.125
UNITED STATES	US	10.375	12.250

GENERAL NOTES

1. WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 877001, 877002, 877006, 877011 AND 877012, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 8'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
2. ALL SIGNS SHALL CONSIST OF A WHITE LEGEND AND BORDER (TYPE ZZ SHEETING) ON A GREEN BACKGROUND (TYPE ZZ SHEETING)
3. THE SIGN LENGTH SHALL BE IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHALL NOT EXCEED 8'-0". ALL BORDERS IF POSSIBLE. BUT MAY BE REDUCED TO 5" WHEN SPACING IS CRITICAL. A MINIMUM OF 2-1/2" SHALL BE INCLUDED BETWEEN THE WORD AND THE RIGHT AND LEFT EDGES OF THE SIGN.
4. A PREFERRED METHOD FOR THE SIGN DESIGN IS TO USE SERIES "D" LETTER ON A ONE-LINE SIGN 18" IN HEIGHT AND A MAXIMUM OF 8'-0" IN WIDTH. IF SERIES "D" DOES NOT FIT ON A 8"-0" SIGN, THEN SERIES "C" SHOULD BE TRIED. IF SERIES "C" DOES NOT FIT ON A 8'-0" SIGN, A 30" HIGH TWO-LINE SIGN CAN BE USED. THE CROSSROAD DESIGNATION AS TO STREET, AVENUE, ETC. SHOULD BE SPELLED OUT ON THE SECOND LINE, IF THE ABBREVIATION CANNOT FIT ON THE FIRST LINE.
5. LED ILLUMINATED STREET NAME SIGNS CAN BE USED IN PLACE OF REGULAR SIGN PANELS BUT ANY SPECIAL WORDING AND SYMBOLOGY MUST BE APPROVED BY THE DEPARTMENT. GENERAL DESIGN REQUIREMENT AS LISTED ABOVE (COLOR, FONT, SIZE, ETC.) MUST BE FOLLOWED.
6. SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS.

LOCAL SUPPLIERS:

- J.O. HERBERT COMPANY, INC
  MIDLOTHIAN, VA
- WESTERN REMAC, INC.
  WOODRIDGE, IL

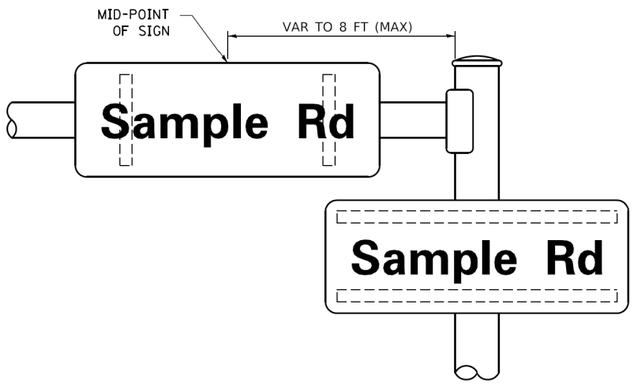
PARTS LISTING:

SIGN CHANNEL	PART #HPN053 (MED. CHANNEL)
SIGN SCREWS	1/4" x 14 x 1" H.W.H. #3 SELF TAPPING WITH NEOPRENE WASHER
BRACKETS	PART #HPN034 (UNIVERSAL) CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

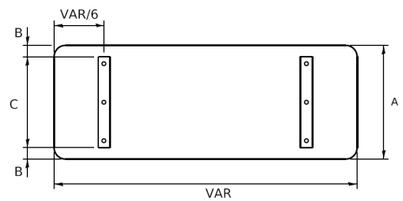
OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BRACKET OF THE ABOVE PRODUCT.

MOUNTING LOCATION

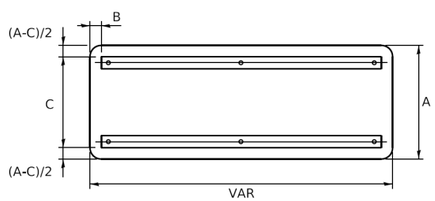
ARM OR POLE MOUNTED



SUPPORTING CHANNELS



A	B	C
18"	2"	14"
30"	2"	24"



A	B	C
18"	2"	12"
30"	2"	22"

STANDARD ALPHABETS SPACING CHART

(8") UPPER CASE AND (6") LOWER CASE

FHWA SERIES "C"				FHWA SERIES "D"			
CHARACTER	LEFT SPACING (INCH)	WIDTH (INCH)	RIGHT SPACING (INCH)	CHARACTER	LEFT SPACING (INCH)	WIDTH (INCH)	RIGHT SPACING (INCH)
A	0.240	5.122	0.240	A	0.240	6.804	0.240
B	0.880	4.482	0.480	B	0.960	5.446	0.400
C	0.720	4.482	0.720	C	0.800	5.446	0.800
D	0.880	4.482	0.720	D	0.960	5.446	0.800
E	0.880	4.082	0.480	E	0.960	4.962	0.400
F	0.880	4.082	0.240	F	0.960	4.962	0.240
G	0.720	4.482	0.720	G	0.800	5.446	0.800
H	0.880	4.482	0.880	H	0.960	5.446	0.960
I	0.880	1.120	0.880	I	0.960	1.280	0.960
J	0.240	4.082	0.880	J	0.240	5.122	0.960
K	0.880	4.482	0.480	K	0.960	5.604	0.400
L	0.880	4.082	0.240	L	0.960	4.962	0.240
M	0.880	5.284	0.880	M	0.960	6.244	0.960
N	0.880	4.482	0.880	N	0.960	5.446	0.960
O	0.720	4.722	0.720	O	0.800	5.684	0.800
P	0.880	4.482	0.720	P	0.960	5.446	0.240
Q	0.720	4.722	0.720	Q	0.800	5.684	0.800
R	0.880	4.482	0.480	R	0.960	5.446	0.400
S	0.480	4.482	0.480	S	0.400	5.446	0.400
T	0.240	4.082	0.240	T	0.240	4.962	0.240
U	0.880	4.482	0.880	U	0.960	5.446	0.960
V	0.240	4.962	0.240	V	0.240	6.084	0.240
W	0.240	6.084	0.240	W	0.240	7.124	0.240
X	0.240	4.722	0.240	X	0.400	5.446	0.400
Y	0.240	5.122	0.240	Y	0.240	6.884	0.240
Z	0.480	4.482	0.480	Z	0.400	5.446	0.400
a	0.320	3.842	0.640	a	0.400	4.562	0.720
b	0.720	4.082	0.480	b	0.800	4.802	0.480
c	0.480	4.002	0.240	c	0.480	4.722	0.240
d	0.480	4.082	0.720	d	0.480	4.802	0.800
e	0.480	4.082	0.320	e	0.480	4.722	0.320
f	0.320	2.480	0.160	f	0.320	2.882	0.160
g	0.480	4.082	0.720	g	0.480	4.802	0.800
h	0.720	4.082	0.640	h	0.800	4.722	0.720
i	0.720	1.120	0.720	i	0.800	1.280	0.800
j	0.000	2.320	0.720	j	0.000	2.642	0.800
k	0.720	4.322	0.160	k	0.800	5.122	0.160
l	0.720	1.120	0.720	l	0.800	1.280	0.800
m	0.720	6.724	0.640	m	0.800	7.926	0.720
n	0.720	4.082	0.640	n	0.800	4.722	0.720
o	0.480	4.082	0.480	o	0.480	4.882	0.480
p	0.720	4.082	0.480	p	0.800	4.802	0.480
q	0.480	4.082	0.720	q	0.480	4.802	0.800
r	0.720	2.642	0.160	r	0.800	3.042	0.160
s	0.320	3.362	0.240	s	0.320	3.762	0.240
t	0.080	2.882	0.080	t	0.080	3.202	0.080
u	0.640	4.082	0.720	u	0.720	4.722	0.800
v	0.160	4.722	0.160	v	0.160	5.684	0.160
w	0.160	7.524	0.160	w	0.160	9.046	0.160
x	0.000	5.202	0.000	x	0.000	6.244	0.000
y	0.160	4.962	0.160	y	0.160	6.004	0.160
z	0.240	3.362	0.240	z	0.240	4.002	0.240
1	0.720	1.680	0.880	1	0.800	2.000	0.960
2	0.480	4.482	0.480	2	0.800	5.446	0.800
3	0.480	4.482	0.480	3	1.440	5.446	0.800
4	0.240	4.962	0.720	4	0.160	6.004	0.960
5	0.480	4.482	0.480	5	0.800	5.446	0.800
6	0.720	4.482	0.720	6	0.800	5.446	0.800
7	0.240	4.482	0.720	7	0.560	5.446	0.560
8	0.480	4.482	0.480	8	0.800	5.446	0.800
9	0.480	4.482	0.480	9	0.800	5.446	0.800
0	0.720	4.722	0.720	0	0.800	5.684	0.800
-	0.240	2.802	0.240	-	0.240	2.802	0.240

MODEL: Default
FILE NAME: pw:\\IL084:EBIDINTEG.dllinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist\Std22x34\CADData\CADsheets\ts02.dgn

USER NAME = footemj	DESIGNED - LP/IP	REVISED - LP 07/01/2015	
	DRAWN - LP	REVISED -	
PLOT SCALE = 50.0000 ' / in.	CHECKED - IP	REVISED -	
PLOT DATE = 3/4/2019	DATE - 10/01/2014	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
MAST ARM MOUNTED STREET NAME SIGNS

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0085	19-00511-00-SP	McHENRY	45	45
	TS-02	CONTRACT NO. 61J51		
	ILLINOIS FED. AID PROJECT			

ts02.dgn 3/4/2019 11:09:17 AM User:footemj